

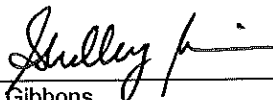
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Final Project Management Plan

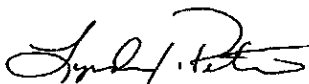
Hunter Army Airfield, Georgia

July 2014





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Final Project Management Plan

Hunter Army Airfield, Georgia

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List of Acronyms and Abbreviations

ACL	Alternate Concentration Limit
ARCADIS	ARCADIS US, Inc.
AST	Above Ground Storage Tank
ATL	Alternate Target Level
bgs	Below ground surface
BTEX	Benzene, Toluene, Ethylbenzene, and Xylene
CAP	Corrective Action Plan
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CIH	Certified Industrial Hygienist
CLIN	Contract Line Item Number
COC	Contaminant of Concern
COR	Contracting Officer's Representative
CRP	Community Relations Plan
CSM	Conceptual Site Model
CSP	Certified Safety Professional
DAACG	Departure/Arrival Airfield Control Group
ERMA	Environmental Remediation Multiple Award
EVO	Emulsified Vegetable Oil
FS	Feasibility Study
ft	Feet
FTA	Fire Training Area
GAEPD	Georgia Environmental Protection Division
HAAF	Hunter Army Airfield
HHRA	Human Health Risk Assessment
HSI	Hazardous Site Index
SSHP	Site-Specific Safety and Health Plan
IRA	Interim Removal Action
ISEB	In-Situ Enhanced Bioremediation
IWTP	Industrial Waste Treatment Plant
JP-4	#4 Jet Propulsion Fuel
LTM	Long Term Monitoring
LUC	Land Use Controls

ug/L	Micrograms per liter
mg/kg	milligram per kilogram
mg/L	Milligrams per liter
MIP	Membrane Interface Probe
MNA	Monitored Natural Attenuation
msl	Mean Sea Level
NFA	No Further Action
OCCA	Official Code of Georgia
ORM	Oxygen Releasing Material
PBA	Performance Based Acquisition
PIKA	PIKA International, Inc.
PMP	Project Management Plan
POP	Period of Performance
PWS	Performance Work Statement
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
QCP	Quality Control Plan
RAB	Restoration Advisory Board
RA-C	Remedial Action-Construction
RA(O)	Remedial Action (Operations)
RAO	Remedial Action Objective
RD/RA	Remedial Design/Remedial Action
RI	Remedial Investigation
ROD	Record of Decision
SAP	Sampling and Analysis Plan
SOF	Special Operations Forces
TCE	Trichloroethene
The JV	PIKA International – ARCADIS U.S., Inc. Joint Venture
TO	Task Order
TOC	Total Organic Carbon
USAEC	United States Army Environmental Command
USEPA	United States Environmental Protection Agency
USGS	United States Geological Society
UST	Underground Storage Tank

VI	Vapor Intrusion
VOCs	Volatile Organic Compounds

1.0 Introduction and Background

The PIKA International, Inc. (PIKA) - ARCADIS U.S., Inc. (ARCADIS) Joint Venture (the JV) has been retained by the United States Army Environmental Command (USAEC) to perform environmental remediation services at Hunter Army Airfield (hereinafter referred to as HAAF or the "Site"), located in Savannah, Georgia (**Figure 1**). The full scope of services for this performance based acquisition (PBA) contract is defined in Contract W9124J-13-D-0009 Task Order (TO) 0004 (**Appendix A**).

This Project Management Plan (PMP) describes the project scope, site background, and the project execution plan for HAAF.

1.1 Project Scope

This PMP supports the scope of services defined in Contract W9124J-13-D-0009 TO 0004 (**Appendix A**) which includes all work necessary to achieve performance objectives at the following sites located at HAAF:

- HAA-01 – Fire Training Site;
- HAA-13 – Pump House #1;
- HAA-15 – MCA Barracks Site; and,
- HAA-17 – TCE Groundwater Contamination.

All work will be performed in accordance with the contract and applicable and relevant regulatory requirements. The intent of this PMP is to indicate how project tasks will be implemented and coordinated with project stakeholders during execution of the work specified in the contract. A summary of performance requirements is provided in **Table 1**.

Table 1 Performance Requirements Summary	
<i>Performance Objective</i>	<i>Performance Standard</i>
<p>Approved Project Management Plan (PMP)</p> <ul style="list-style-type: none"> ▪ Draft PMP within 30 calendar days of contract award. ▪ Final PMP within 30 calendar days of receipt of Contracting Officer's Representative (COR) comments on the Draft <p>Annual update of PMP within 30 calendar days of the anniversary of the award of the contract.</p>	<p>Army approval of the PMP by the COR.</p>
<p>(BASE) Achieve Final Remedial Investigation (RI) and Feasibility Study (FS) Report within 24 months from award of the task order for the following sites:</p> <ul style="list-style-type: none"> ▪ HAA-17: TCE Groundwater Contamination ▪ HAA-15: MCA Barracks Site ▪ HAA-01: Fire Training Site 	<p>Army approval through the COR/Army and written regulatory concurrence (e.g., receipt of Final RI/FS)</p>
<p>(Option) Complete a Proposed Plan/Record of Decision (ROD) 12 months from award of the Contract Line Item Number (CLIN) or completion of the Final Feasibility Study or which is later:</p> <ul style="list-style-type: none"> ▪ HAA-17: TCE Groundwater Contamination ▪ HAA-15: MCA Barracks Site ▪ HAA-01: Fire Training Site <p>Note: Option may be exercised no later than 60 days following COR approval of the Final FS Report.</p>	<p>Army approval through the COR/Army and Regulatory concurrence (e.g., receipt of Final Proposed Plan and ROD)</p>
<p>(Option) Complete Remedial Design/Remedial Action-Construction (RA-C) at the follow site no later than 12 months from receipt of the Final RODs for the following sites:</p> <ul style="list-style-type: none"> ▪ HAA-01: Fire Training Site ▪ HAA-15: MCA Barracks Site ▪ HAA-17: TCE Groundwater Contamination <p>Note: Option may be exercised no later than 60 days following COR approval of the Draft ROD Report.</p>	<p>Army approval through the COR/Army and Regulatory concurrence (e.g., receipt of Final RD/RA and performance reports documenting system performance against Remedial Action Objectives [RAOs]).</p>

Table 1 Performance Requirements Summary	
<i>Performance Objective</i>	<i>Performance Standard</i>
<p>(Option) Perform Remedial Action Operation at the following site for 12 months.</p> <ul style="list-style-type: none"> ▪ HAA-01: Fire Training Site ▪ HAA-15: MCA Barracks Site ▪ HAA-17: TCE Groundwater Contamination <p>One option CLIN Note 1: Option CLIN may be exercised no later than 60 days following COR approval of the Draft RA-C Report.</p> <p>Note 2: Upon achievement of response complete, the contractor shall petition Georgia Environmental Protection Division (GAEPD) for removal from the Hazardous Site Inventory (HSI) listing for each site.</p>	<p>Army approval through the COR/Army and Regulatory concurrence (e.g., receipt of required performance reports).</p>
<p>(Option) Perform any necessary Remedial Action Operations beginning 1 January 2015 and/or Long-term Management (LTM) including applicable system/monitoring network optimization and maintenance, Land Use Control (LUC) inspections and/or maintenance and complete any required effectiveness monitoring reports for the duration of the task order. In addition, the contractor shall provide an exit strategy/ramp down strategy and discuss any optimization efforts completed as part of the annual reports:</p> <ul style="list-style-type: none"> ▪ HAA-13: Pump Houses #1 <p>Annual option CLINs to be exercised for 12 months of effort no later than one year from award of the previous CLIN for an additional 36 months. The final option shall cover 6 months.</p>	<p>Army approval through the COR and Regulatory concurrence (e.g., receipt of documentation confirming RC; RA(O)/LTM exit or ramp down strategy; RA(O)/LTM reports incorporating requirements of the exit or ramp down strategy).</p>
<p>(Option) Develop well abandonment plan for all site-wide wells no longer required to support remediation at this site and remove those wells in accordance with applicable requirements.</p> <p>ONE OPTION CLIN may be exercised no later than 48 months from the award of the task order.</p>	<p>Army approval through the COR and Regulatory concurrence</p>

1.2 PMP Revisions

This PMP is intended to be a dynamic project planning and execution document, developed during initial task execution with input from the Army. To facilitate the management of updates, each page includes the revision number in the lower right

hand corner. A revision log will be included within each iteration of the PMP, as presented in **Table 2**.

Table 2: Revision Log					
Revision	00	01	02	03	04
Date	July 25, 2014				
Section 1	July 25, 2014				
Section 2	July 25, 2014				
Section 3	July 25, 2014				
Section 4	July 25, 2014				
Section 5	July 25, 2014				
Section 6	July 25, 2014				
Section 7	July 25, 2014				
Table 1	July 25, 2014				
Table 2	July 25, 2014				
Table 3	July 25, 2014				
Table 4	July 25, 2014				
Table 5	July 25, 2014				
Table 6	July 25, 2014				
Figure 1	July 25, 2014				
Figure 2	July 25, 2014				
Appendix A	July 25, 2014				
Appendix B	July 25, 2014				
Appendix C	July 25, 2014				
Appendix D	July 25, 2014				
Appendix E	July 25, 2014				

2.0 Site Background and Environmental Program Status

2.1 Site Location and History

HAAF is located in Chatham County, in the southwestern portion of Savannah, Georgia. The airfield is bounded on the north by lightly populated areas, on the east and south by residential and light commercial areas, and on the west by the Little Ogeechee River. HAAF provides an aircraft support base for Fort Stewart which is located in Hinesville, Georgia. Fort Stewart became a Flight Training Center in 1966, and HAAF was acquired from the U.S. Air Force in 1967 to support the increased need for helicopter pilot training during the Vietnam Conflict.

The mission of HAAF is to provide command, control, training, administration, logistical and civilian-military support to assigned and attached non-divisional units stationed at Fort Stewart. HAAF features a runway that is 11,375 feet long and an aircraft parking area that is more than 350 acres. The runway and apron, combined with the 72,000 sq feet Arrival/Departure Facility and nearby railhead, allow the 3rd Infantry Division from nearby Fort Stewart to efficiently deploy Soldiers and cargo worldwide.

2.2 Setting

HAAF has in a coastal plain physiographic setting. The installation is heavily wooded with numerous surface water drainages and creeks. HAAF is bounded on the west by the Little Ogeechee River, which receives surface water drainage from the site.

2.3 Conceptual Site Model

HAAF is located in Chatham County, Georgia, in the southwestern portion of Savannah and covers approximately 5,400 acres. Historically, HAAF served as the site of the first Savannah Municipal Airport, a graded grass airfield constructed in 1929. Construction of three intersecting asphalt runways in the middle of the current concrete parking apron and a new hangar was completed in 1936. The Army acquired the property from the United States Air Force in 1967 for use as a flight-training center. The mission of the facility is to provide command, control, training, administration, logistical, and civilian-military support to non-divisional units stationed at Fort Stewart and HAAF. Aircraft based at HAAF currently include combat, transport, and training aircraft. The airfield is also used for overseas mobilization of troops and equipment.

HAA-01, HAA-13, HAA-15, and HAA-17 surround the airfield runways, which are the topographic high of the facility. The runways were built on the remnants of a relict beach ridge, the Pamlico Terrace, with current elevations ranging from 20 to 40 feet (ft) above mean sea level (msl).

The hydrogeology in the vicinity and at HAAF consists of two aquifers, the Floridan and Surficial, separated by a thick confining unit, the Hawthorne Group. The Floridan aquifer is a regionally extensive aquifer that is approximately 800 ft thick in the area of the site and is the primary water supply in the area. It is comprised primarily of Oligocene-age and Eocene-age porous limestones. The uppermost aquifer system is the surficial aquifer at the site consisting of a sequence of near-shore to shoreface (barrier island) sediments consisting mainly of sands with interbeds of clays and silts increasing at depth with thicknesses of 40 to 100 ft. Separating these two aquifer systems are continuous clay units of the Hawthorne Group that are over 100 ft thick and underlain by two continuous clay units separating this aquifer from the Floridan, acting as a major confining unit. A deep test well at HAAF (36Q397) shows that interbedded the clay units extend from approximately 60 to 300 ft below ground surface (bgs) (USGS, 2012). These clays are significant and have not allowed vertical migration of constituents to the Floridan aquifer. Constituents to date have migrated vertically and horizontally through the more permeable sands at shallow depths of the surficial aquifer and have not been encountered deeper and are not expected to migrate into the confining units.

2.4 Site Details

ARCADIS' contract goal is to achieve the project objectives defined in Table 1 for each of the PBA sites encompassed by this contract in a timely, and regulatory acceptable manner. The following sections provide an overview of the specific approaches and strategies to be used in achieving this objective. **Figure 2** depicts the Site locations within HAAF.

2.4.1 HAA-01 – Fire Training Site

HAA-01 consists of the former fire training area (FTA) and the Departure/Arrival Airfield Control Group (DAACG) in the northwestern portion of the HAAF. The site is west of the flight line and approximately 800 ft northwest of the control tower. The topography of the site slopes gently west toward the Springfield Canal. The canal flows southwest before emptying into the Little Ogeechee River Floodplain. The elevation of the site

ranges from about 35 ft msl at the eastern boundary of HAA-01 (fire training pad) to 14 ft msl along the northwestern boundary (the northern drainage ditch) of the site.

The former FTA consisted of a steel structure utilized as a mock aircraft that was on placed on gravel covered concrete fire training pad (a 6,400-square-foot-area enclosed within a concrete curb). Two above-ground storage tanks (ASTs), a 17,000 gallon fuel AST and a 1,100 gallon fuel and solvent contaminated water AST, were also located at the site approximately 150 ft north of the training pad. Contaminated fuels (#4 Jet Propulsion Fuel (JP-4) and diesel fuel) were sprayed on the mock aircraft then ignited and extinguished during the training. Fire training activities were discontinued at the site in 1991, and all components of the FTA, along with contaminated soils, were removed in 1998 as part of soil remediation activities. During the initial investigation conducted in 1999 and 2000, chlorinated solvent impacts were detected in groundwater north of the former FTA. This area was identified as the DAACG chlorinated solvents area. Due to their proximity and history, the FTA and DAACG chlorinated solvent area have been treated as one site for investigation and remediation purposes.

Multiple phases of investigation were conducted at HAA-01 between January 1997 and February 2012 to delineate impacts to soil, groundwater, surface water, and sediment. The investigations successfully delineated the horizontal and vertical extent of impacts at HAA-01. The sample analysis results indicated low-level impacts to soil, surface water, and sediment and higher-level impacts detected in shallow groundwater. The primary groundwater contaminants of concern (COCs) for the FTA are benzene and naphthalene. Aldrin, benzene, cis-1,2-dichloroethene, trans-1,2-dichloroethene and vinyl chloride are the primary groundwater COCs in the DAACG area.

In support of RI development, the JV will conduct a limited investigation to fill in any remaining data gaps. The investigation will include collection of shallow and deep groundwater samples to evaluate current shallow and deep groundwater conditions, collection of surface water and sediment samples in the drainage canal west of the FTA area, and completion of a vapor intrusion (VI) evaluation. Following completion of the investigation, a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) RI/FS report will be prepared based on new and existing data. As part of the RI/FS, a human health and ecological risk assessment will be completed to serve as the foundation for development of the proposed remedial action.

Active remediation will focus on achieving hot spot treatment in the DAACG area to reduce contaminant concentrations with an optimized monitoring program to manage

dilute groundwater impacts in both the former FTA and DAACG areas. The JV will implement an in-Situ enhanced bioremediation (ISEB) treatment remedy to address residual chlorinated volatile organic compounds (VOCs) within the DAACG area. The remedial approach will address areas of the shallow groundwater plume with elevated soil and/or groundwater impacts. With the active treatment, monitored natural attenuation (MNA) and institutional controls will be implemented to manage areas of the Site with low level groundwater COCs.

The JV will prepare a Proposed Plan for public comment of the remedy followed by a ROD and implementation of the approved remedial action. Ongoing operation, maintenance and ISEB remedy will be required. Monitoring locations downgradient from the injection barriers will be used to confirm distribution of the remedial substrate, demonstrate enhancement of the reductive dechlorination process, and confirm sufficient organic electron donor (i.e. total organic carbon [TOC]) is available to promote treatment. Operation of the remedy will entail periodic (e.g., every 2 to 3 years) injection of the emulsified vegetable oil (EVO) substrate to sustain treatment in each barrier and segment the primary plume mass into sections to enable treated groundwater transport between barriers. As TOC concentrations decline within the vicinity of the injection barrier, subsequent injection events will be completed to replenish the organic carbon supply as needed. The JV will operate the system until the end of the contract period of performance (POP).

2.4.2 HAA-15 – MCA Barracks Site

The MCA Barracks Site (HAA-15) is north of the flight line in the northeastern portion of HAAF. This area has historically and currently houses barracks, hangers, maintenance areas, a heat plant facility, administrative buildings, recreation facilities, crash stations, warehouses, guardhouses, former hospital buildings, a Link trainer building, mess halls, officers' quarters, and a theater. The site contains a 10-acre pond and the two main potable wells for the installation. Initial discovery of impacts occurred during preconstruction investigation for the Special Operations Forces (SOF) facility and MCA Barracks during 1996 through 1998.

Two trichloroethene (TCE) source areas have been identified at HAA-15. The primary source originates near Hanger T-811 area where TCE was used as a cleaner and solvent. TCE contaminated soil was detected during the removal of the grease trap associated with T-811. The grease trap was used to dispose of spent solvent that was then discharged to the sewer conveyance lines running northward from Hanger T-811 and along Lightning Drive. No source mass was detected in the vadose zone near the

grease trap or sewer lines. Extensive investigation near Hanger T-811 and the sewer lines successfully delineated the impacts to groundwater with the highest groundwater concentrations detected downgradient of hanger T-811. Any historical impacts in soil most likely have dissipated through the discharge of water from the sewer lines and subsequent dissolution from soils and/or natural attenuation following the rumination of the cleaning and maintenance operations in Hanger T-811 that resulted in the TCE release. A second TCE source area was identified near the aircraft wash racks and former Industrial Waste Treatment Plant (IWTP) adjacent to Building 850, southeast of the Hanger T-811. In this area, TCE was detected in groundwater in the deep zone of the upper aquifer at one location. Concentrations indicative of source mass were not detected in unsaturated soil in the area or in the shallow zone of the upper aquifer.

Surface soil sampling, conducted in 2006, indicate lead and mercury impacts in the Old Hospital Area. Mercury impacts were delineated to below background concentrations in 2006. Supplemental surface soil sampling performed in 2010 completed the delineation of the lead impacts. Although a clear source of the lead impacts has not been identified, the impacts are near the boiler room that provided steam heat to the old hospital. Coal was reportedly used to fuel the boilers and may have been the source of the soil impacts. How long the boiler room was in operation or how long coal was used as the fuel source is unknown. Other surface soil analysis results in the area were much lower than the maximum lead concentration and the impacts are limited to a small area.

In support of RI development, the JV will conduct a limited investigation to fill any remaining data gaps. The investigation will include installation of one shallow and one deep groundwater monitoring well, collection of shallow and deep groundwater samples to evaluate current groundwater conditions, and completion of a VI evaluation. Following completion of the investigation, a CERCLA RI/FS report will be prepared based on the new and existing data. As part of the RI/FS, a human health and ecological risk assessment will be completed to serve as the foundation for development of the proposed remedial actions.

In conjunction with existing site use restriction and supported by the RI/FS risk assessment activities, the JV will implement a focused source treatment approach to eliminate identified source mass, reduce the primary flux of contaminants with the plume core, and manage HAA-15 groundwater using a long-term monitoring program. Active remediation will include implementation of an ISEB remedy for treatment of elevated chlorinated VOCs in groundwater north of the former airfield hangers. The JV will install and operate two ISEB injection barriers to address the primary VOC mass

flux within the main plume and conduct localized injections near the former IWTP for treatment of the secondary hot spot.

The JV will prepare a Proposed Plan for public comment of the remedy followed by a ROD and implementation of the approved remedial action. Ongoing operation, maintenance and ISEB remedy will be required. Monitoring locations downgradient from the injection barriers will be used to confirm distribution of the remedial substrate, demonstrate enhancement of the reductive dechlorination process, and confirm sufficient organic electron donor (i.e. TOC) is available to promote treatment. Operation of the remedy will entail periodic (e.g., every 2 to 3 years) injection of the EVO substrate to sustain treatment in each barrier and segment the primary plume mass into sections to enable treated groundwater transport between barriers. As TOC concentrations decline within the vicinity of the injection barrier, subsequent injection events will be completed to replenish the organic carbon supply as needed. The JV will operate the system until the end of the contract POP.

2.4.3 HAA-17 – TCE Groundwater Contamination

HAA-17 is located in the northeastern portion of HAAF and east of the flight line. Facilities currently and formerly located in the investigation area are the purge facility, Former Underground Storage Tanks (USTs) 25 and 26, Building 1290, former drycleaner location, and former Strategic Air Command special weapons area. The former UST 25 and 26 site is in the 260th Quartermaster Motorpool on Tubb Road. UST 25 had a capacity of 25,000 gallons and stored diesel fuel. UST 26 had a capacity of 6,000 gallons and stored gasoline. Both USTs were located in the same tank pit and constructed of fiberglass-coated steel with associated piping constructed of steel with protective coating. The HAAF purge facility is located in the southern section of the investigation area and is an active facility where tanker trucks that store and transport petroleum products, mainly JP-8, are cleaned. Building 1290 is located in the western section of the investigation area adjacent to the airfield and serves as an aircraft hangar where solvents were formerly used as part of degreasing activities. Other facilities previously located in the investigation area include a former dry cleaning facility that was east of Building 1290 and a former weapons cleaning facility that was south of the former dry cleaner.

Multiple investigation activities have been completed since 1999 that successfully characterized the vertical and horizontal extent of contamination distribution in both the shallow and deep surficial aquifer groundwater intervals. These activities have indicated that low level TCE and hydrocarbon concentrations are present near former

UST 25 and 26, the purge facility, and former weapon cleaning facility, with the primary HAA-17 contaminants associated with the former UST 25 and 26 area. An interim removal action (IRA) was completed within this area during 2006, removing two well locations and limited shallow impacted soils associated with petroleum free product encountered.

In conjunction with the former TCE UST area investigation, investigation activities were also completed at the purge facility between May to July 2006. Results from the purge facility investigation indicated that limited concentrations of both petroleum hydrocarbons and TCE were detected in shallow and deep groundwater, respectively.

Site-wide investigation activities completed during 2007 and 2008 were conducted in areas extending from Building 1290 to the former UST area and locations east of the drainage canal. These activities indicated that contaminant impacts were not observed near Building 1290 and confirmed that the highest TCE concentrations were present within the former UST 25 and 26 area at depths ranging between approximately 20 to 30 ft bgs.

Building on the previous investigations, additional site characterization activities were conducted from November 2009 through January 2012 that included hydraulic testing, sampling of existing and new monitoring wells, and vertical and horizontal delineation of source area with membrane interface probe (MIP) and soil/groundwater sampling. The investigation was completed to the base of the shallow aquifer as determined by the presence of the confining clay unit encountered site-wide at depths between 40 and 45 ft bgs (shallower near the canal). Thinner sequences of silty clays were encountered above 40 ft bgs in select borings near the former USTs 25 and 26 and appear to act as semi-confining units that separate the shallow and deep portions of the upper aquifer. These units were not observed in borings completed at the purge facility or at the former dry cleaning facility.

A groundwater divide is evident in both shallow and deep groundwater between Building 1290 and the former purge facility. The flow direction of groundwater in the Building 1290 area is generally westerly toward the taxiways. Groundwater in the shallow and deep zones in the central and eastern portions of the HAA-17 area follows the topographic gradient of the site and flows to the southeast toward the former location of the USTs 25 and 26 and the canal. Deep zone groundwater continues to flow east under the drainage canal. Data indicate the drainage ditch is a discharge point for shallow groundwater and surface water levels mimic shallow groundwater conditions. Artesian conditions exist in some well proximate to the canal.

Based on the extensive investigations conducted at HAA-17, three main areas of groundwater contamination were found, the former UST 25/26 area, the purge facility area, and the former drycleaner area. The highest TCE impacts were reported in deep groundwater (30 to 40 foot interval) in the former UST 25/26 area with minor impacts reported around the purge facility and former dry cleaner area. Petroleum impacts and low-level VOCs were also reported in shallow groundwater (2.5 to 12.5 foot interval) in UST 25/26 area. Although diffuse, the TCE source appears centered in the area of historic soil borings AF-52 and AF-53 located between former USTs 25 and 26 and Building 1345.

In support of RI development, the JV will conduct a limited investigation to fill any remaining data gaps. The investigation will include installation of 4 additional monitoring wells, collection of shallow and deep groundwater samples to evaluate current groundwater conditions, and completion of a VI evaluation. Following completion of the investigation, a CERCLA RI/FS report will be prepared based on the new and existing data. As part of the RI/FS, a human health and ecological risk assessment will be completed to serve as the foundation for development of the proposed remedial actions.

Active remediation will focus on development of an appropriate site-wide monitoring program to manage low level concentrations of contaminants in groundwater in conjunction with focused source mass reduction near the former UST 25 and 26 area to reduce potential failure risk to receptors and the overall long-term monitoring duration. The JV will complete a one-time injection of EVO from a network of temporary direct push injection points to establish a long-term source of organic carbon and promote degradation of chlorinated VOCs in exceedance of 1,000 micrograms per liter (ug/L). The dilute VOCs outside of the UST 25 and 26 area and historical site-wide groundwater COC impacts identified within the vicinity of the Purge Facility, Building 1290, the Former Drycleaner, and the Former SAC Special Weapons Facility will be managed via a groundwater monitoring program and institutional controls.

The JV will prepare a Proposed Plan for public comment of the remedy followed by a ROD and implementation of the approved remedial action. Ongoing performance monitoring will be required following remedy implementation to evaluate the remedy performance and ensure groundwater concentrations are continuing to degrade. The JV will complete the required performance monitoring activities until the end of the contract POP.

2.4.4 HAA-13 – Pump House #1

Former Pump House #1 (HAA-13) was an aviation-fuel island located along the east-west taxiway of HAAF used from about 1953 until the early 1979s. It consisted of ten 25,000-gallon USTs and a 50,000-gallon underground defueling tank. The pump house was inactive from the 1970s to 1995, when eight of the 25,000-gallon USTs were removed. The 50,000-gallon defueling tank and two of the 25,000-gallon tanks remained in-place, partially under the pump house structure. In 1998, the pump house structure was removed, along with the two remaining 25,000 gallon USTs. The 50,000-gallon defueling tank was closed in-place. The piping from the boundary of the pump house facility to the bulk fuel farm was also drained, pigged, and grouted in-place. The horizontal and vertical extent of petroleum-related impacts in soil and groundwater was delineated by activities performed during previous investigations at the former Pump House #1 site and the DAACG facility.

2.4.4.1 Release #1

Release #1 is an area of soil and groundwater contamination near the DAACG facility and former Fuel Pits 1A and 1B. Benzene, toluene, ethylbenzene, and xylene (BTEX) are the constituents of potential concern identified for site groundwater. The recommended remedial strategy for groundwater in the original Corrective Action Plan (CAP) was free product removal followed by MNA. The first phase of the corrective action is substantially complete, as free product has not been detected at a measureable thickness in site monitor wells since December 2006. The second phase of the corrective action is remediation of benzene in groundwater to below the GAEPD approved Alternate Concentration Limit (ACL) of 285 ug/L. To reduce the estimated timeframe for groundwater to reach ACLs, an active remedy was recommended in the Revised CAP-Part B (ARCADIS, 2009a) and the Revised CAP-Part B Addendum #1 (ARCADIS, 2009b) to address the remaining groundwater impacts. The remedy consists of calcium peroxide injections to increase oxygen concentrations in the aquifer and enhance aerobic biodegradation of the residual BTEX impacts in groundwater. Two calcium peroxide injections have been conducted. Benzene concentrations in the site monitor wells are close to the ACL of 285 ug/L and have shown a long-term decreasing trend.

As of the October 2013 sampling event, one monitoring well (D-MW-37) exceeded the existing ACL, and only two other monitoring wells (D-MW-34 and P1R1-MW-02) have exhibited an exceedance of the ACL within the past 2 years. The extent of benzene is currently delineated, does not represent a risk to receptors under the current site

conditions, and is adequately managed by the on-going MNA program. The JV will optimize the current groundwater monitoring program via the systematic reduction in monitoring locations no longer necessary to support data assessment. In accordance with the current approved Revised CAP-Part B (ARCADIS, 2009a) and the Revised CAP-Part B Addendum #1 (ARCADIS, 2009b), the JV will conduct semi-annual groundwater monitoring and CAP Progress Reporting within the POP. If concentrations in groundwater decrease below the ACL for two consecutive events, the JV will request no further action (NFA) from GAEPD.

2.4.4.2 Release #2

Release # 2 is in an area of soil and groundwater contamination near the former Pump House #1 facility and former Fuel Pits 1C and 1D, approximately 200 ft north of the former Tank Pits. The approved corrective actions for soil and groundwater at the former Pump House #1 Release #2 in the original CAP – Part B report included free product removal and MNA. In May 2006, six injection wells were installed around the Pump House #1 Release #2 tank pit area for the injection of oxygen-releasing material (ORM) to enhance the degradation of the BTEX compounds. Injections were conducted from July 2006 through April 2007. Site contaminant levels were not significantly reduced through the injection of oxygen releasing material (ORM) over the 1-year period, and were generally attributed to the inadequate delivery of the solid ORM material from the injection wells.

As specified in the CAP-Part B report, corrective action activities will be discontinued when benzene concentrations in groundwater are reduced to below the GAEPD approved ACL of 285 µg/L. Additionally, benzene and chrysene concentrations in soil must be below the approved alternate threshold limits (ATL) of 9.3 and 2.1 milligrams per kilogram (mg/kg), respectively. Subsurface soil sampling performed in January 2008 indicated that the benzene concentrations are below the ATL of 9.3 mg/kg. Soil samples were not analyzed for chrysene.

To decrease the remedial timeframe and to mitigate impacts to canal surface water downgradient of the petroleum hydrocarbon plume, two additional remedial actions were implemented. In-situ chemical oxidation using sodium persulfate was conducted to reduce contaminant mass in the source area. The migration of dissolved BTEX to the drainage canal was mitigated by blending reactive columns of calcium peroxide in two offset rows of vertical borings to develop an aerobic reactive barrier and stimulate aerobic biodegradation of contaminants in groundwater prior to discharge into the canal.

Five injections of sodium persulfate and two calcium peroxide barrier replenishment events have been performed to date. An additional persulfate injection and calcium peroxide installation event will be conducted during 2014. Chemical oxidation with sodium persulfate has been effective in destroying contaminant mass. However, residual mass present within the vicinity of the injection network has limited achievement of complete BTEX reduction and benzene concentrations currently exist above the ACLs. The source treatments and the calcium peroxide barrier along the canal south of the site have mitigated BTEX impacts to surface water in the canal, reducing the footprint and magnitude of BTEX groundwater distribution.

The combination of sodium persulfate injections and passive oxygen delivery via the downgradient treatment barrier reduced hydrocarbon source material and controlled dissolved-phase transport towards the canal. The JV will modify the current remedy to further enhance treatment of dissolved-phase hydrocarbons – specifically benzene – as they migrate along the primary plume path. Ongoing persulfate injections have resulted in hydrocarbon destruction via both direct oxidation and sulfate-mediated (generated via persulfate consumption) anaerobic biodegradation. Ongoing performance monitoring indicates that while positive treatment has been achieved, residual hydrocarbon mass likely exists either outside and/or above the water table near the source area injection network and continues to serve as a source of benzene in groundwater above the ACL. Additional improvements in water quality anticipated following the fifth persulfate injection completed in June 2014 will further reduce benzene impacts in Remediation Area A, and the persulfate injection program can be discontinued. In conjunction with discontinuing the injection program, the JV will install a second reactive barrier south of the runway to serve as a source of oxygen release to cut off the future transport of residual benzene concentrations. This reactive barrier will expand on the successful operation of the existing barrier and serve as a second reactive wall to segment the plume and support passive treatment of impacts to below the ACL. The JV anticipates the longevity of each barrier to be 1 to 2 years. Following discontinuation of the persulfate injection program, the JV will request approval for reductions in monitoring from quarterly to semi-annual frequency. The monitoring program will be used to confirm the reactive barrier treatment performance, determine when the reactive barrier needs to be replenished, demonstrate when benzene concentrations have been reduced to below the ACL, and support demonstration of site closure. The JV will continue semi-annual groundwater monitoring and CAP Progress Reporting until the end of the POP.

2.5 Well Abandonment

To help minimize the Army's long-term monitoring costs, the JV will prepare a well abandonment work plan to optimize the monitoring network at HAA-01, HAA-13, HAA-15, and HAA-17. The JV will consider the total needs of the site in determining the wells for abandonment. The work plan will also include the existing monitoring wells at the recently closed site HAA-09 Release 3. Wells no longer required as part of the remedy implementation or long-term monitoring programs will be abandoned by a Georgia certified well driller, under the direct supervision of a registered professional geologist (from the JV), and in accordance with the Georgia Water Well Standards Act, Official Code of Georgia (O.C.G.A.) 12-5-120 et seq., Georgia Groundwater Use Act, O.C.G.A. 12-5-90 et seq. and 12-5-105 et seq., Georgia Safe Drinking Water Act, O.C.G.A. 12-5-170 et seq., and applicable Georgia Department of Natural Resources' rules, regulations and guidance documents. The JV will prepare and submit a completion report to document the well abandonment activities.

3.0 Risk Management Plan

Risks associated with the successful completion of the PBA at HAAF will be proactively managed by the JV, in conjunction with the Decision Makers Forum. Table 3 lists the primary risks associated with successful implementation of the Performance Work Scope (PWS) at HAAF and the planned mitigation measures.

Table 3 Risk Management Matrix		
Risk Identification	Nature of Risk/ Potential Impact	Mitigation Measures
Vapor intrusion assessment within HAA-15	Chlorinated VOC plume beneath existing barracks.	The highest VOC concentrations detected during historical investigations were in deep groundwater at HAA-15. Multiple buildings are located near the groundwater plume. The stratified vertical nature of the plume, characterized by low VOC concentrations within shallow groundwater (10 to 30 ft bgs) that overlies the higher VOC concentrations in deeper groundwater (35 to 50 ft bgs) and presence of the primary plume in areas that are not overlain by existing structures suggest that VI risks will be limited. The partitioning of VOCs present at the water table to soil gas is anticipated to be limited and otherwise mitigated by attenuation mechanisms that would support the dispersion, diffusion, and degradation of these COCs within soil gas. The JV will conduct vapor intrusion modeling to determine the potential for vapor intrusion. If a potential risk is identified, the JV will collect soil gas and/or sub-slab samples to further evaluate the potential risk. If field tests indicate vapor intrusion is an issue, the JV will work with HAAF and GAEPD to develop mitigation measures for the affected buildings.
Supplemental 1,4-dioxane sampling	Detection of 1,4-dioxane above remediation standards.	Any 1,4-dioxane impacts above regulatory standards will be delineated as part of the RI and evaluated in the FS.

Table 3 Risk Management Matrix

Risk Identification	Nature of Risk/ Potential Impact	Mitigation Measures
Acceptance of long-term maintenance and monitoring programs	GAEPD may require a more comprehensive long-term maintenance and monitoring program.	Supplemental groundwater monitoring conducted in support of the RI/FS and completion of the human health risk assessment will provide the technical basis for the remedies proposed at each site. The risk assessments will assess all potentially complete exposure scenarios to demonstrate mitigation by either the proposed remedy or appropriate provisions put in place to specify future site use while soil and/or groundwater impacts are present. The JV will consider the ongoing use of HAAF as an active military base, the associated access restrictions at the facility, and the source of drinking water being derived from either the un-impacted Floridan aquifer or public supply as part of the RI/FS activities. The long-term maintenance and monitoring programs will provide measures for these provisions to remain adequate and demonstrate when they can be lifted. The JV will work with both HAAF and GAEPD to develop these programs and ensure that sampling activities, inspections, and reporting methods demonstrate that requirements are upheld.
GAEPD acceptance of remedial approach	The JVs proposed approaches entail a combination of both active treatment to address the primary COC mass and MNA to manage dilute plume impacts that cannot be managed in a cost-effective manner. GAEPD may require active remediation for an expanded area.	The JV will support the remedial approach by a fully developed conceptual site model (CSM), a robust MNA demonstration as part of the RI/FS, a risk evaluation, and a monitoring program developed in the RD/RA work plan to guide long-term evaluation and assessment of changes in groundwater conditions across the installation. The JV members have worked with the GAEPD to develop similar remedial strategies that include both active and passive components to cost effectively manage remediation activities at other active military installations. The JV will engage the GAEPD in the remedial decision making process, support negotiations over the course of remedial development, and support final approval of the proposed approach.
Delays in Regulatory Reviews	Extensive delays in regulatory reviews can impact the overall project schedule. Based on the number of concurrent PBAs being performed under GAEPD oversight, delays are likely.	The JV will work with all stakeholders to expedite formal approval of work plans and key decision documents. However, when formal approvals are delayed, the JV will evaluate proceeding at risk on allowable activities. To maintain the project schedule, the JV will work with both HAAF and GAEPD to obtain preliminary approvals and mitigate the risks of proceeding on field activities without formal regulatory approval.

4.0 Project Execution

This section presents the project team, the communications plan, project meetings, the Quality Management Plan, and an overview of the Health and Safety program. These sections represent the current best estimate for the planning and execution of the work necessary to achieve the performance objectives and requirements outlined in the PWS. As the project proceeds, these sections will be revised as necessary.

4.1 Project Team

This section details the project team structure (both external and internal to the JV), roles, and responsibility.

4.1.1 Decision Makers Forum

It is the JV's philosophy that the key to successful project execution is the development of a central team of decision makers, known as the Decision Makers Forum. These team members, in a manner consistent with existing agreements, work together to facilitate decisions and to integrate all regulatory and technical requirements into those decisions. The core members of this team are outlined in **Table 4**.

Table 4: Hunter Army Airfield Annex Decision Makers Forum		
Name and Contact Information	Telephone/E-Mail	Project Function
Paul Higgs U.S. Army Environmental Command 2450 Connell Road, 1st Floor Bldg 2264 Fort Sam, Houston, 78234-7664	Phone: (210) 466-1727 Cell: (210) 834-6954 paul.a.higgs@us.army.mil	U.S. Army Environmental Command COR
Algeana Stevenson Hunter Army Airfield DPW Prevention and Compliance Branch 106 MacArthur Circle Bldg 615 Savannah, GA 31409	Office: (912) 315-5144 Cell: (912) 210-2950 Fax: (912) 315-5148 algeana.l.stevenson.civ@mail.mil	Hunter Army Airfield Installation Program Manager
Zsolt Haverland USACE Savannah District 100 W. Oglethorpe Avenue Savannah, GA 31401	Office: (912) 652-5815 Fax: (912) 652-6040 Zsolt.E.Haverland@usace.army.mil	US Army Corps of Engineers Technical Oversight

Table 4: Hunter Army Airfield Annex Decision Makers Forum

Name and Contact Information	Telephone/E-Mail	Project Function
Amy Potter Georgia Department of Natural Resources Environmental Protection Division 2 Martin Luther King Jr. Drive Suite 1152, East Tower Atlanta, GA 30334	Office: (404) 463-0080 Fax: (404) 463-7669 amy_potter@mail.dnr.state.ga.us	GAEPD Department of Defense (DoD) Restoration Unit Coordinator
A. Mohamad Ghazi, Ph. D. Georgia Environmental Protection Division 2 Martin Luther King Jr. Drive Suite 1152, East Tower Atlanta, GA 30334	Office: (404) 463-7507 Fax: (404) 463-7669 mo_ghazi@dnr.state.ga.us	GAEPD DoD Restoration Unit
William Logan Georgia Environmental Protection Division 4244 International Parkway Suite 104 Atlanta, GA 30334	Office: (404) 362-4529 Fax: (404) 362-2654 William.Logan@dnr.state.ga.us	GAEPD UST Management Program Corrective Action Unit II
Shelley Gibbons ARCADIS 801 Corporate Center Drive Suite 300 Raleigh, NC 27607	Office: (919) 415-2256 Cell: (919) 623-9556 Fax: (919) 854-5448 shelley.gibbons@arcadis-us.com	PIKA-ARCADIS Project Manager

Successful execution of this project requires input and coordination from all members of the Decision Makers Forum. Meetings between these parties will be scheduled regularly as discussed in Section 4.3: Communications Plan. Additional input from other stakeholders will be solicited as required.

4.2 Project Team

This section details the project team structure, roles, and responsibility.

4.2.1 Project Team Organization and Management

The JV has established a project organization to emphasize command and control, with delegation from the Project Manager to individual key technical personnel. The JV's proposed project organization is illustrated in **Figure 2**.

4.2.2 Roles and Responsibilities

The objective of our project organization is to provide a streamlined structure to implement assignments in the most cost effective, timely, and technically sound manner possible. To achieve this objective, the JV has designated four functional elements within this organization: Project Management, Corporate Oversight, Technical Advisors, and Technical Resources. Each position within these groups' carries with it a well defined set of responsibilities and authorities, as described on Table 5.

Table 5: Project Personnel Roles and Responsibilities	
Position	Responsibilities
<u>Project Management</u> Project Manager: Shelley Gibbons	<ul style="list-style-type: none"> Oversees/directs all work for this TO to meet all contractual obligations. Single point of contact for the task order and has overall responsibility for meeting the contract objectives. Leads monthly progress / cost reporting; responsible for meeting the project schedule and/or managing change proactively. Coordinates regulatory negotiations in coordination with the government (with prior approval from the contracting officer representative (COR)) ensuring appropriate JV technical staff is present at partnering meetings to develop and negotiate strategies with the GAEPD and technical experts. Supports Army in all other stakeholder relations efforts, such as public/ Restoration Advisory Board meetings, and provides technical resources to best support these efforts. Establishes and coordinates projects controls (scope, schedule, and budget).Oversees the preparation/submittal of plans/reports and tracks on-time delivery of all submittals. Ensures quality control procedures are followed.
<u>Corporate Oversight</u> Project Director: Lynden Peters	<ul style="list-style-type: none"> Ensures Program Leadership/Direction Defines Client Objective for Contract Interface with USAEC Management & Army Contracting Agency Contracting Personnel Advise Project Manager
<u>Technical Advisor</u> Regulatory Specialist: Richard Collins	<ul style="list-style-type: none"> Point of contact for coordination and resolution of regulatory issues. Ensures project team conducts CERCLA and GAEPD UST Management Program services in accordance with all applicable United States Environmental Protection Agency (USEPA)/GAEPD environmental requirements and policies. Maintains close communication and coordination with the Army to serve as a resource, as needed, for resolution of legal, regulatory, and policy concerns.

Table 5: Project Personnel Roles and Responsibilities	
Position	Responsibilities
<u>Technical Resource</u> Senior Scientist/Engineer: James Bedessem, PE	<ul style="list-style-type: none"> ▪ Responsible for the overall management and implementation of the technical strategy and quality of the task order in coordination with the project manager. ▪ Directs all aspects of the technical approach, assigns technical roles and oversees the implementation of the technical approach. ▪ Directs the RI work and data to provide products to select and implement an appropriate remedy without delay or future ROD reopeners.
<u>Technical Resource</u> Certified Industrial Hygienist (CIH) / Certified Safety Professional (CSP): Tom Burgess, CSP	<ul style="list-style-type: none"> ▪ Responsible for developing, implementing, and overseeing all safety and health for the task order in accordance with EM 385-1-1; reviews and approves site-specific safety and health plan (SSHP) deliverables and ensures procedures are followed. ▪ Assigns site safety officers to lead safety meetings, work stand-downs, and oversee day-to-day safety compliance in the field. ▪ Coordinates safety planning/implementation with the JV and subcontractor staff.
<u>Technical Resource</u> Risk Assessor: Shawn Sager, PhD	<ul style="list-style-type: none"> ▪ Ensures task order risk assessment (human health and ecological) goals are attained. ▪ Ensures data quality objectives align with evaluating risks during RI and FS and evaluates site data and summary from the RI to advise during FS planning. ▪ Performs initial evaluation of the relative degree of risk posed at the sites.

The JV will use its existing office in Raleigh, North Carolina to execute and manage this project. Resources from around the JV will be drawn upon as needed.

4.3 Communications Plan

This section defines the planned communications and progress reporting protocols.

4.3.1 Interactions between the JV and the Army

The JV project manager, Ms. Shelley Gibbons, is the primary point of contact for the Army on this contract for technical and project management communications. She will interface with the COR and members of the Decision Makers Forum on an as-needed basis. Ms. Gibbons will be responsible for communicating the technical strategy for each site to the Army. Such communication will occur prior to any discussion with the regulators. All technical strategies (or preliminary discussion thereof) must be acceptable to the Army prior to the JV holding discussions with the regulatory agencies.

The JV project manager will utilize a team of experts to ensure that project deliverables meet the performance objectives and the needs of the stakeholders. The JV will work

cooperatively with project stakeholders to identify and resolve problems, avoid disputes, and facilitate successful contract performance. The JV will develop a partnering process, building on past success, that:

- Facilitates open and continuous communication, mutual trust, and respect;
- Promotes the creation of a shared plan and vision for success;
- Establishes mutual goals and objectives;
- Reduces paperwork by simultaneous review and approval of information;
- Empowers the staff participating to jointly and expeditiously resolve problems at the lowest level; and
- Preserves the legal and regulatory obligations of the U.S. Army.

4.3.2 Interactions with Regulatory Agencies

As required to meet TO objectives, the JV will attend and or/support meetings to discuss technical or regulatory issues with the Army team, regulatory agency representatives, and other stakeholders. The Army team will be present for all technical meetings as well as any teleconferences with the regulatory agencies; however, the JV will provide logistical support, present materials, and lead technical discussions. The JV will prepare minutes within two weeks of meetings.

4.3.3 Interactions with the Public

Public participation necessary to achieve TO objectives will include one public meeting for the combined Proposed Plan for HAA-01, HAA-15, and HAA-17. At this time, sufficient community interest does not exist to establish and sustain a Restoration Advisory Board (RAB) or technical review committee for HAAF. If public interest increases and a RAB is established during the POP, the JV will support the Army as necessary, including delivering presentations, graphics depicting site conditions, fact sheets, newsletters, and public notices.

A community relations plan (CRP) has been prepared for HAAF with the last update completed in 2012. The JV will update the CRP for the installation every 3 years within the POP. The deliverable will be provided to the COR for review and approval. All public participation coordination will be approved by the Army in accordance with the

CRP and the JV will not make available or publicly disclose any data or report generated under this TO unless specifically authorized by the COR.

4.3.4 Monthly Progress Meetings and Manpower Reporting

As required by the PWS, the Project Manager will complete and submit monthly progress reports to the Army that document activities completed, upcoming activities, safety reporting, summary of deliverables, record of communication, percent complete for each task, and personnel or schedule updates, if applicable. These reports will support project team communication to ensure the project scope, budget, and schedule are being achieved. All reports will be delivered in electronic email format to the Decision Makers Forum. Progress reporting may occur more frequently to address any schedule changes or issues requiring support from the Army. At a minimum of once per year and no later than 30 September of each year, the JV will report to the Office of the Assistant Secretary of Army (Manpower & Reserve Affairs) the manpower information required.

4.3.5 Milestone Presentations

Milestone presentations to the COR will be held at the completion of each key milestone to provide analysis and lessons learned, and will provide approaches for completion of future milestones. Also, at the COR's request, the JV will provide milestone presentations to the other project stakeholders, to show completion of performance objectives.

4.3.6 Document Submittal

All documents will be submitted in draft form to the Army. The COR will be responsible to coordinate Army review and provide ultimate approval. Subsequent to the Army's review, a response to comments table and revisions will be submitted using the "track changes" function in Microsoft Word. Once the draft document is deemed acceptable by the COR, a draft final document will be submitted to GAEPD for review and comment. Once GAEPD comments have been addressed to GAEPD's satisfaction with approval of the COR, the final document will be submitted. The document distribution list including names and addresses is provided in **Appendix B**. Specific scheduling requirements for document review are presented in **Table 6** below.

Table 6: Document Review Protocols

Army Reviewers	When documents are sent out from the contractor for internal review, the goal for each reviewer is to have their review comments or a negative response sent back via email within 30 calendar days.
JV Team Members	When Army comments are provided, the goal for the JV is to address comments within 30 calendar days.

4.4 Quality Assurance /Quality Control Program

The JV's Quality Assurance and Quality Control (QA/QC) programs are presented in the original Environmental Remediation Multiple Award (ERMA) Contract Proposal dated 7 December 2011. This JV TO will be executed using an integrated quality program which incorporates elements from both JV firms. This will ensure the JV provides the quality of services and deliverables that are necessary to successfully complete the required work and meet performance objectives. Following our internal procedures and guidance, the JV will implement proven project-specific approaches in the project planning and execution phase to monitor, control and maintain quality. These approaches will be documented in a Quality Control Plan (QCP) included as **Appendix C**. The QCP documents procedures and activities to ensure delivery of products that meet the Army's expectations, acceptable scientific and engineering standards, and project quality objectives. The QCP includes the following phases of participation:

- Ongoing QC by the contract team: principals, project managers and assigned project team (engineers / designers / CADD technicians / scientists);
- Periodic peer reviews by the corporate QA manager, contract QC manager, department managers or other technical specialists not involved with the project;
- Confirmation by the project manager that the project conforms to the QCP; and
- Assurance from the project manager or QC supervisor that QA has been applied to the project.

4.5 Health and Safety, Analytical Quality Control, and Site-wide Documents

The JV will update existing site-wide work plans to reflect the work proposed herein, including a SSHP, Sampling Analysis Plan (SAP), and Quality Assurance Project Plan (QAPP). The SSHP will be in compliance with EM-385-1-1.

5.0 Schedule Management

A detailed schedule, that contains a work break down structure to identify tasks and subtasks and provide the durations for each, is provided in **Appendix D**. These tasks and subtasks are being linked to identify the critical path necessary to successfully complete the project. The schedule will be a living document, being updated throughout the life of the project. The JV project manager will utilize the schedule to develop and modify the resource plan as well as project logistical planning. The schedule will be the primary measurement of the project progress.

6.0 Milestone Billing Schedule

The Milestone Billing Schedule (**Appendix E**) provides a list of all approved milestones and submilestones organized by Contract Line Item Number (CLIN).

7.0 References

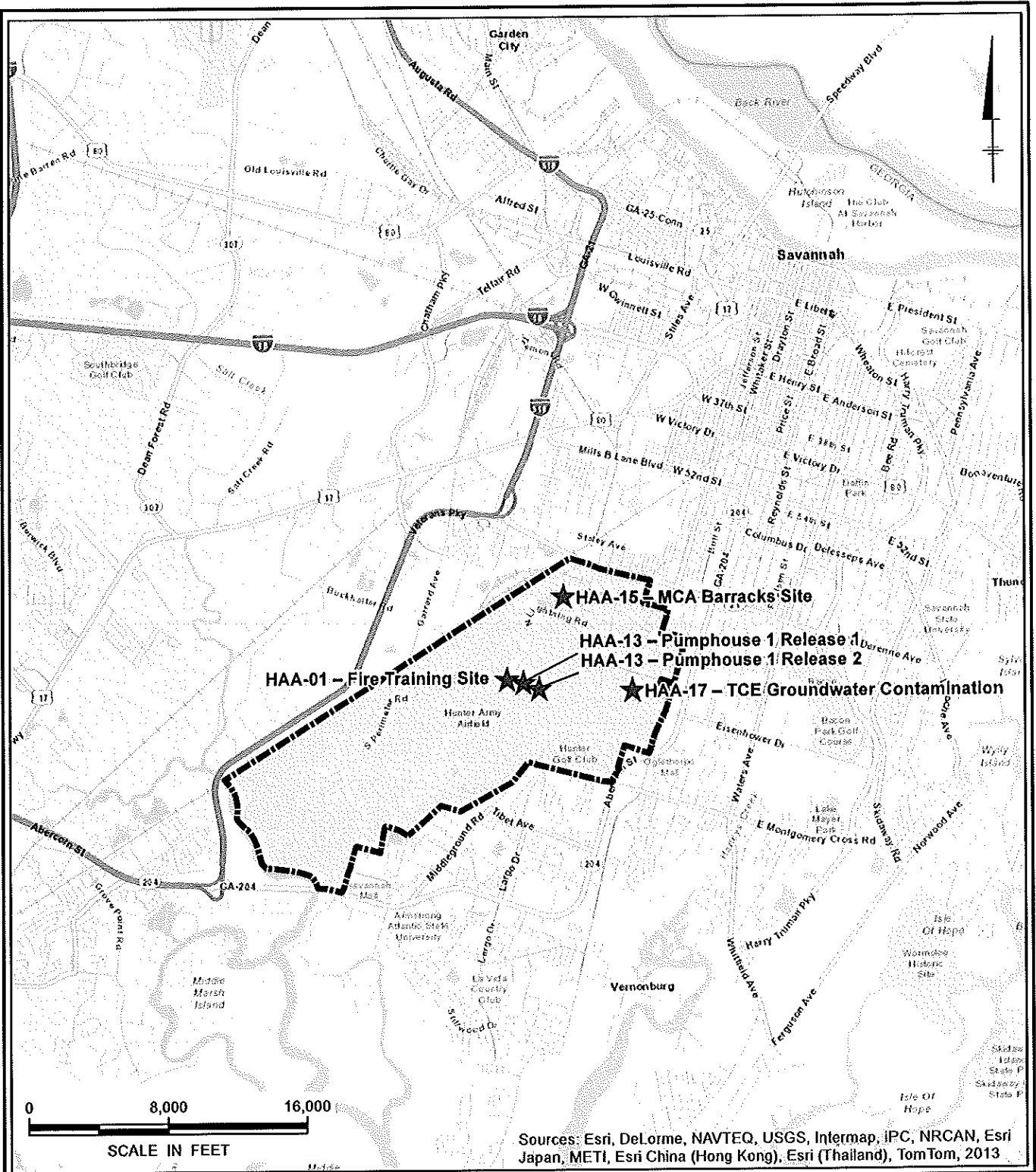
ARCADIS, 2009a. *Final Revised Corrective Action Plan – Part B with 2008 Annual Report*, Former Pumphouse #1 (Release #2), Former Building 8060, Hunter Army Airfield, Savannah, Georgia, July 2009.

ARCADIS 2009b. *Fifteenth Semiannual Monitoring Report With Addendum #1 to Revised Corrective Action Plan – Part B*, Former Pumphouse #1, Release #2, Former Building 8060, Hunter Army Airfield, Savannah, Georgia, October 2009.

United States Geological Survey (USGS), 2012. *Hydrogeologic Characteristics and Water Quality of a Confined Sand Unit in the Surficial Aquifer System*, Hunter Army Airfield, Chatham County, Georgia, Gonthier, Gerard J., USGS Scientific Investigations Report. 2012-5082.

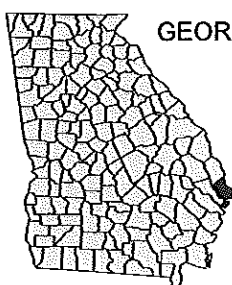
Figures

CITY: KNOXVILLE DIV: GROUP: ENV/GIS LD: (BALTIMORE) PIC: (B. TEMPLE) PM: (S. GIBBONS) PROJECT: 10153001.0001
 PATH: G:\GIS\HAAF_P\KAWAPDOCS\HAAF_SW2014 PROJ MANAGEMENT PLAN\HAAF_SW REG SITE LOCATION.MXD SAVED: 6/9/2014 BY: BALTIMORE



Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, IPC, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, 2013

PROJECTION: NAD 1983 StatePlane Georgia East FIPS 1001 Feet



GEORGIA

Chatham County

HUNTER ARMY AIRFIELD, GEORGIA

Site Location Map



FIGURE

1

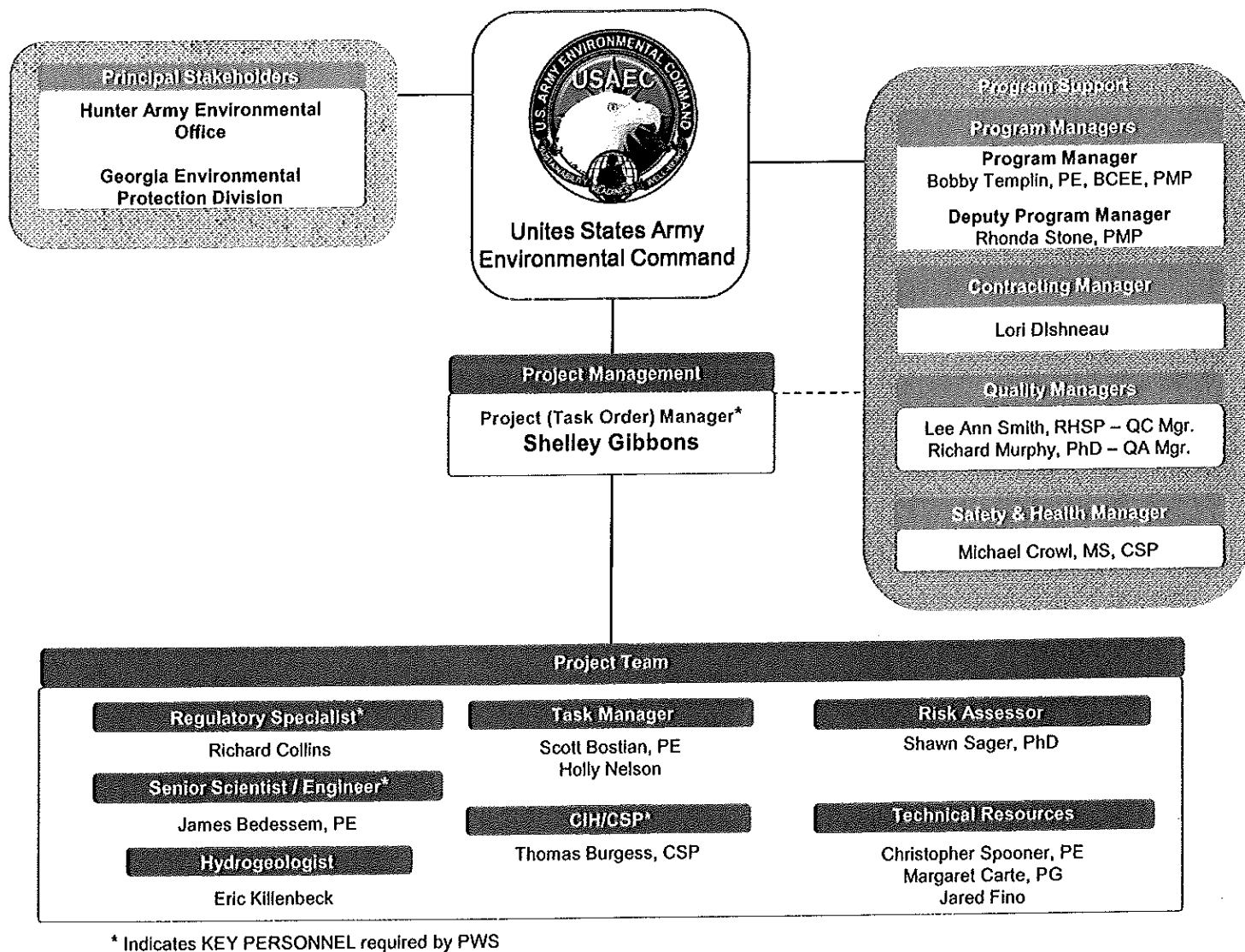


Figure 2 Hunter Army Airfield Project Team

Appendix A

Contract

ORDER FOR SUPPLIES OR SERVICES										PAGE 1 OF 13	
1. CONTRACT/PURCH. ORDER/ AGREEMENT NO. W91ZLK-13-D-0009			2. DELIVERY ORDER/ CALL NO. 0004		3. DATE OF ORDER/CALL (YYYYMMDD) 2014 May 22		4. REQ./ PURCH. REQUEST NO. 0010453010-0001			5. PRIORITY	
6. ISSUED BY MICC - FSH ATTN: MICC - FSH 2205 INFANTRY POST RD 210-466-2145 FORT SAM HOUSTON TX 78234-1361				CODE W9124J		7. ADMINISTERED BY (if other than 6) SEE ITEM 6				8. DELIVERY FOB <input checked="" type="checkbox"/> DESTINATION <input type="checkbox"/> OTHER (See Schedule if other)	
9. CONTRACTOR PIKA-ARCAOIS JV NAME LORI DISHNEAU AND 12723 CAPRICORN DRIVE ADDRESS STAFFORD TX 77477-4104				CODE 6GRJ2		FACILITY		10. DELIVER TO FOB POINT BY (Date) (YYYYMMDD) SEE SCHEDULE		11. MARK IF BUSINESS IS <input type="checkbox"/> SMALL <input type="checkbox"/> SMALL DISADVANTAGED <input type="checkbox"/> WOMEN-OWNED	
12. DISCOUNT TERMS Net 30 Days								13. MAIL INVOICES TO THE ADDRESS IN BLOCK See item 15			
14. SHIP TO CDR, US ARMY ENVIRONMENTAL COMMAND CDR, US ARMY ENVIRONMENTAL COMMAND 2450 CONNELL ROAD FORT SAM HOUSTON TX 78234				CODE W81W25		15. PAYMENT WILL BE MADE BY DFAS IN VP GFEBS 8899 E. 56TH ST INDIANAPOLIS IN 46249-3800				MARK ALL PACKAGES AND PAPERS WITH IDENTIFICATION NUMBERS IN BLOCKS 1 AND 2.	
16. TYPE OF ORDER		DELIVERY/ CALL		<input checked="" type="checkbox"/>		This delivery order/call is issued on another Government agency or in accordance with and subject to terms and conditions of above numbered contract.					
		PURCHASE		<input type="checkbox"/>		Reference your quote dated Furnish the following on terms specified herein. REF:					
ACCEPTANCE. THE CONTRACTOR HEREBY ACCEPTS THE OFFER REPRESENTED BY THE NUMBERED PURCHASE ORDER AS IT MAY PREVIOUSLY HAVE BEEN OR IS NOW MODIFIED, SUBJECT TO ALL OF THE TERMS AND CONDITIONS SET FORTH, AND AGREES TO PERFORM THE SAME.											
NAME OF CONTRACTOR				SIGNATURE				TYPED NAME AND TITLE		DATE SIGNED (YYYYMMDD)	
<input checked="" type="checkbox"/> If this box is marked, supplier must sign Acceptance and return the following number of copies: 1											
17. ACCOUNTING AND APPROPRIATION DATA/ LOCAL USE See Schedule											
18. ITEM NO.		19. SCHEDULE OF SUPPLIES/ SERVICES				20. QUANTITY ORDERED/ ACCEPTED*		21. UNIT		22. UNIT PRICE	
		SEE SCHEDULE								23. AMOUNT	
* If quantity accepted by the Government is same as quantity ordered, indicate by X. If different, enter actual quantity accepted below quantity ordered and encircle.				24. UNITED STATES OF AMERICA TEL: 210-466-2130 EMAIL: luis.trinidad@sus.army.mil BY: LUIS O. TRINIDAD				25. TOTAL \$410,732.00		26. DIFFERENCES	
27a. QUANTITY IN COLUMN 20 HAS BEEN <input type="checkbox"/> INSPECTED <input type="checkbox"/> RECEIVED <input type="checkbox"/> ACCEPTED, AND CONFORMS TO THE CONTRACT EXCEPT AS NOTED											
b. SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE						c. DATE (YYYYMMDD)		d. PRINTED NAME AND TITLE OF AUTHORIZED GOVERNMENT REPRESENTATIVE			
e. MAILING ADDRESS OF AUTHORIZED GOVERNMENT REPRESENTATIVE						28. SHIP NO.		29. DO VOUCHER NO.		30. INITIALS	
f. TELEPHONE NUMBER		g. E-MAIL ADDRESS				<input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL		32. PAID BY		33. AMOUNT VERIFIED CORRECT FOR	
36. I certify this account is correct and proper for payment.						31. PAYMENT <input type="checkbox"/> COMPLETE <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL				34. CHECK NUMBER	
a. DATE (YYYYMMDD)		b. SIGNATURE AND TITLE OF CERTIFYING OFFICER								35. BILL OF LADING NO.	
37. RECEIVED AT		38. RECEIVED BY		39. DATE RECEIVED (YYYYMMDD)		40. TOTAL CONTAINERS		41. S/R ACCOUNT NO.		42. S/R VOUCHER NO.	

Section B - Supplies or Services and Prices

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001		1	Job	\$100,919.00	\$100,919.00

Development of Core Documents

FFP

30 days from award of the task order for Draft PMP

30 days from receipt of COR comments on the draft PMP for Final PMP*

FOB: Destination

PURCHASE REQUEST NUMBER: 0010453010-0001

NET AMT

\$100,919.00

ACRN AA

CIN: GFEBS001045301000001

\$100,919.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002					\$0.00

Sites HAA-01, HAA-015, HAA-017

FFP

HAA-01 – (Former Fire Training Area and DAACG Chlorinated Solvents Areas)

HAA-015 - (HAA-015 MCA Barracks Site)

HAA-017 – (TCE Groundwater Contamination)

FOB: Destination

NET AMT

\$0.00

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002AA	Remedial Investigation/Feasibility Repor FFP 24 months from award of the CLIN FOB: Destination PURCHASE REQUEST NUMBER: 0010453010-0001	1	Job	\$309,813.00	\$309,813.00

NET AMT	\$309,813.00
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ACRN AA CIN: GFEB001045301000002	\$309,813.00
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ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002AB OPTION	(Option) Proposed Plan/Record of Decisio FFP 12 months from award of the CLIN Note: Option may be exercised no later than 60 days following COR approval of the Final FS Report. FOB: Destination	1	Job	\$104,216.00	\$104,216.00

NET AMT	\$104,216.00
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ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002AC		1	Job	\$426,695.00	\$426,695.00
OPTION	(Option) Remedial Design/Remedial Action FFP 12 months from award of the CLIN Note: Option may be exercised no later than 60 days following COR approval of the Draft ROD Report. FOB: Destination				

NET AMT	\$426,695.00
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ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002AD		1	Job	\$416,430.00	\$416,430.00
OPTION	(Option) Remedial Action Operations FFP 12 Months from award of the CLIN Note: Option may be exercised no later than 60 days following COR approval of the Draft RA-C Report. FOB: Destination				

NET AMT	\$416,430.00
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ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0003					\$0.00
	HAA-13 Pump House #1 FFP FOB: Destination				

NET AMT	\$0.00
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ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0003AA		1	Job	\$135,704.00	\$135,704.00
OPTION	(Option) RAO/LTM FFP 12 Months from award of the CLIN Note: Option may be exercised no later than 1 Jan 2015. FOB: Destination				

NET AMT	\$135,704.00
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ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0003AB		1	Job	\$127,092.00	\$127,092.00
OPTION	(Option) RAO/LTM FFP 12 Months from award of the CLIN Note: Option may be exercised no later than 12 months from award of CLIN 0003AA FOB: Destination				

NET AMT	\$127,092.00
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ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0003AC OPTION	(Option) RAO/LTM FFP 12 Months from award of the CLIN Note: Option may be exercised no later than 12 months from award of CLIN 0003AB FOB: Destination	1	Job	\$133,218.00	\$133,218.00

NET AMT	\$133,218.00
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ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0003AD OPTION	(Option) RAO/LTM FFP 12 Months from award of the CLIN Note: Option may be exercised no later than 12 months from award of CLIN 0003AC FOB: Destination	1	Job	\$128,624.00	\$128,624.00

NET AMT	\$128,624.00
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ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0003AE OPTION	(Option) RAO/LTM FFP 6 Months from award of the CLIN Note: Option may be exercised no later than 12 months from award of CLIN 0003AD FOB: Destination	1	Job	\$68,856.00	\$68,856.00

NET AMT	\$68,856.00
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ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0004 OPTION	(Option) Well Abandonment Plan FFP 12 Months from award of the CLIN Note: Option may be exercised no later than 48 months from award of the task order FOB: Destination	1	Job	\$98,433.00	\$98,433.00

NET AMT	\$98,433.00
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ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0005	CMR Reporting FFP Not Separately Priced (NSP) Contractor to provide services in accordance with the enclosed PWS for the duration of the task order. FOB: Destination	1	Job		NSP

NET AMT

Section E - Inspection and Acceptance

INSPECTION AND ACCEPTANCE TERMS

Supplies/services will be inspected/accepted at:

CLIN	INSPECT AT	INSPECT BY	ACCEPT AT	ACCEPT BY
0001	Destination	Government	Destination	Government
0002	Destination	Government	Destination	Government
0002AA	Destination	Government	Destination	Government
0002AB	Destination	Government	Destination	Government
0002AC	Destination	Government	Destination	Government
0002AD	Destination	Government	Destination	Government
0003	Destination	Government	Destination	Government
0003AA	Destination	Government	Destination	Government
0003AB	Destination	Government	Destination	Government
0003AC	Destination	Government	Destination	Government
0003AD	Destination	Government	Destination	Government
0003AE	Destination	Government	Destination	Government
0004	Destination	Government	Destination	Government
0005	Destination	Government	Destination	Government

Section F - Deliveries or Performance

DELIVERY INFORMATION

CLIN	DELIVERY DATE	QUANTITY	SHIP TO ADDRESS	UIC
0001	POP 22-MAY-2014 TO 21-AUG-2014	N/A	CDR, US ARMY ENVIRONMENTAL COMMAND CDR, US ARMY ENVIRONMENTAL COMMAND 2450 CONNELL ROAD FORT SAM HOUSTON TX 78234 FOB: Destination	W81W25
0002	N/A	N/A	N/A	N/A
0002AA	POP 22-MAY-2014 TO 21-MAY-2016	N/A	CDR, US ARMY ENVIRONMENTAL COMMAND CDR, US ARMY ENVIRONMENTAL COMMAND 2450 CONNELL ROAD FORT SAM HOUSTON TX 78234 FOB: Destination	W81W25
0002AB	N/A	N/A	N/A	N/A
0002AC	N/A	N/A	N/A	N/A
0002AD	N/A	N/A	N/A	N/A
0003	N/A	N/A	N/A	N/A
0003AA	N/A	N/A	N/A	N/A
0003AB	N/A	N/A	N/A	N/A
0003AC	N/A	N/A	N/A	N/A
0003AD	N/A	N/A	N/A	N/A
0003AE	N/A	N/A	N/A	N/A
0004	N/A	N/A	N/A	N/A
0005	N/A	N/A	N/A	N/A

Section G - Contract Administration Data

ACCOUNTING AND APPROPRIATION DATA

AA: 0212014201420200000449493323 S.0006815.1.1.2 6100.9000021001
COST CODE: A2AAC
AMOUNT: \$410,732.00
CIN GFEB001045301000001: \$100,919.00
CIN GFEB001045301000002: \$309,813.00

Section I - Contract Clauses

CLAUSES INCORPORATED BY REFERENCE

252.232-7006 Wide Area WorkFlow Payment Instructions

MAY 2013

Section J - List of Documents, Exhibits and Other Attachments

<u>Title</u>	<u>Description</u>	<u>Pages</u>
Attachment A.1	Performance Work Statement (PWS)	18
Attachment A.2	PWS Appendix A, Performance Requirement Summary	2
Attachment B	Wage Determination WD 2005-2141, Revision No. 14	10

**Performance Work Statement
for Four Sites:
(HAA-01, HAA-13, HAA-15, HAA-17)
Hunter Army Airfield, Georgia**

**PART 1
GENERAL INFORMATION**

1. General: This is a non-personnel services firm-fixed price contract to provide environmental remediation services for four sites at Hunter Army Airfield (HAAF), Georgia.

1.1 Description of Services/Introduction: The Contractor shall provide all personnel, equipment, supplies, facilities, transportation, tools, materials, supervision, and other items and non-personal services necessary to complete the contract requirements specified in Table 1 of this Performance Work Statement (PWS) except for those items specified as Government furnished property and services (see Part 3). The Contractor shall perform to the standards in this task order and the Basic Contract.

1.2 Background: HAAF is located on 5,400 acres of land in Chatham County, Georgia, in the southwestern part of Savannah. The airfield is bounded on the north by lightly populated areas, on the east and south by residential and light commercial areas, and on the west by the Little Ogeechee River/Forest River.

The mission of the Fort Stewart/HAAF complex is to sustain a quality of life and installation support at the level necessary for division, non-divisional, tenant, and reserve component units to accomplish their training mission.

HAAF obtained a RCRA Part A permit and was under interim status as a hazardous waste generation and storage facility. In 1983, the United States Environmental Protection Agency (USEPA) directed HAAF to file a RCRA Part B permit application. Following an inspection conducted on April 21, 1993 by the Georgia Environmental Protection Division (GAEPD), HAAF was served with a Notice of Violation which was followed by a proposed Consent Order which subjected HAAF to the provisions of the Georgia Hazardous Waste Management Act, as amended, Official Code of Georgia Annotated (O.C.G.A) Section 12-8-60 and placed on the State's Superfund List.

The Contractor shall be responsible for fully executing this firm fixed price contract under a Performance-Based Acquisition (PBA). Work to be accomplished includes, but is not limited to, conducting required environmental remediation services for which the United States Department of the Army (the "Army") is statutorily responsible; addressing any and all environmental, explosive safety, scheduling, and regulatory issues; and assuming contractual liability and responsibility for the achievement of the contract requirements identified in Table 1 of this PWS. All the contamination associated with these four sites shall be addressed including any that has migrated off the installation.

The sites are not suspected to contain Chemical Warfare Materiel (CWM). The Contractor shall not perform CWM work; however, the Contractor shall be familiar with and be able to recognize CWM to be able to stop work and to notify the Army of these potential hazards.

Please note that no munitions and explosives of concern (MEC) are anticipated based on site history. However, if evidence of these items is found, Contractor shall immediately stop work and contact the Contracting Officer Representative (COR) and Contracting Officer (KO). The Contractor shall not perform MEC work; however, the Contractor shall be familiar with and be able to recognize MEC to be able to stop work and to notify the Army of these potential hazards.

The Contractor shall perform all the necessary environmental remediation work required to meet the contract requirements of this PWS in a manner that is consistent with Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA), and the National Oil and Hazardous Substances Contingency Plan (NCP), with regulatory coordination with Georgia Environmental Protection Department (GA EPD).

The Contractor shall comply with all applicable Federal, state and local laws and regulations and achieve the service requirements of this PWS in a manner that is consistent with any applicable orders or permits, all existing cleanup agreements or guidance for the Installation, and relevant DOD and Army regulations, policies, and procedures, for the duration of the contract.

1.3 **Objectives:** The contract requirements for this task order may be found in Table 1. The performance requirements summary for this task order may be found in Appendix A.

Comment [khg1]: Please run this by the PM. Is this what we need the contractor to propose to given what is in the history above, a Georgia Part A permit and then a consent order under the state's "superfund" designation.

Comment [jpb2]: What is written is correct and the background of the installation is correct also. The Consent Order does not apply to the sites in this task order. So I did not make changes to the PWS.

Table 1: Contract Requirements Summary

Contract Requirements	Acceptance Criteria
<p>Approved Project Management Plan (PMP)</p> <ul style="list-style-type: none"> Draft PMP within 30 calendar days of contract award. Final PMP within 30 calendar days of receipt of COR comments on the Draft <p>At a minimum, an annual update of PMP within 30 calendar days of the anniversary of the award of the contract shall be completed.</p>	<p>Development of PMP as specified in 5.2 of PWS. Army approval of the PMP by the COR.</p>

<p>(BASE) Achieve Final Remedial Investigation (RI) and Feasibility Study (FS) Report within 24 months from award of the task order for the following sites:</p> <ul style="list-style-type: none"> • HAA-17: TCE Groundwater Contamination • HAA-15: MCA Barracks Site • HAA-01: Fire Training Site 	<p>Army approval through the COR/Army and written regulatory concurrence (e.g., receipt of Final RI/FS)</p>
<p>(Option) Complete a Proposed Plan/Record of Decision 12 months from award of the CLIN or completion of the Final Feasibility Study or which is later:</p> <ul style="list-style-type: none"> • HAA-17: TCE Groundwater Contamination • HAA-15: MCA Barracks Site • HAA-01: Fire Training Site <p>Note: Option may be exercised no later than 60 days following COR approval of the Final FS Report.</p>	<p>Army approval through the COR/Army and Regulatory concurrence (e.g., receipt of Final Proposed Plan and ROD)</p>
<p>(Option) Complete Remedial Design/Remedial Action-Construction (RA-C) at the follow site no later than 12 months from receipt of the Final RODs for the following sites:</p> <ul style="list-style-type: none"> • HAA-01: Fire Training Site • HAA-15: MCA Barracks Site • HAA-17: TCE Groundwater Contamination <p>Note: Option may be exercised no later than 60 days following COR approval of the Draft ROD Report.</p>	<p>Army approval through the COR/Army and Regulatory concurrence (e.g., receipt of Final RD/RA and performance reports documenting system performance against RAOs)</p>

<p>(Option) Perform Remedial Action Operation at the following site for 12 months.</p> <ul style="list-style-type: none"> • HAA-01: Fire Training Site • HAA-15: MCA Barracks Site • HAA-17: TCE Groundwater Contamination <p>One option CLIN</p> <p>Note 1: Option CLIN may be exercised no later than 60 days following COR approval of the Draft RA-C Report.</p> <p>Note 2: Upon achievement of response complete, the contractor shall petition GAEPD for removal from the Hazardous Site Inventory (HSI) listing for each site.</p>	<p>Army approval through the COR/Army and Regulatory concurrence (e.g., receipt of required performance reports).</p>
<p>(Option) Perform any necessary Remedial Action Operations beginning 1 January 2015 and/or Long-term Management (LTM) including applicable system/monitoring network optimization and maintenance, Land Use Control (LUC) inspections and/or maintenance and complete any required effectiveness monitoring reports for the duration of the task order. In addition, the contractor shall provide an exit strategy/ramp down strategy and discuss any optimization efforts completed as part of the annual reports:</p> <ul style="list-style-type: none"> • HAA-13: Pump Houses #1 <p>Annual option CLINs to be exercised for 12 months of effort NLT one year from award of the previous CLIN for an additional 36 months. The final option shall cover 6 months.</p>	<p>Army approval through the COR and Regulatory concurrence (e.g., receipt of documentation confirming RC; RA(O)/LTM exit or ramp down strategy; RA(O)/LTM reports incorporating requirements of the exit or ramp down strategy).</p>

(Option) Develop well abandonment plan for all site-wide wells no longer required to support remediation at this site and remove those wells in accordance with applicable requirements. ONE OPTION CLIN may be exercised NLT 48 months from the award of the task order.	Army approval through the COR and Regulatory concurrence
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1.4 Scope: The scope of this is defined in Table 1.

1.5 Period of Performance: The period of performance shall not exceed five years from the date of award.

1.6 General Information:

1.6.1 Quality Control (QC): The Contractor shall comply with Section C.5.9 of the Basic Contract. QC is the responsibility of the Contractor. The Contractor shall deliver quality services to the Government. The Contractor shall develop, implement and maintain an effective Quality Control System which includes a written Quality Control Plan (QCP). The QCP shall implement standardized procedure/methodology for monitoring and documenting contract performance to ensure all contract requirements are met. The Contractors' QCP shall contain a systematic approach to monitor operations to ensure acceptable services/products are provided to the Government. The QCP, as a minimum, shall address continuous process improvement; procedures for scheduling, conducting and documentation of inspection; discrepancy identification and correction; corrective action procedures to include procedures for addressing Government discovered non-conformances; procedures for root cause analysis to identify the root cause and root cause corrective action to prevent re-occurrence of discrepancies; procedures for trend analysis; and procedures for collecting and addressing customer feedback/complaints. The Contractor shall upon request provide to the Government their quality control documentation. The QCP, in hard copy (3 copies) and electronically, is to be delivered to the KO and COR within 30 days after contract award. In addition, three copies of a comprehensive written QCP shall be submitted to the KO and COR within 5 working days when changes are made thereafter. After acceptance of the QCP the Contractor shall receive the KO's acceptance in writing of any proposed change to their QC system/plan.

1.6.2 Quality Assurance (QA): The Government shall evaluate the Contractor's performance under this contract in accordance with the Quality Assurance Surveillance Plan (QASP). This plan is a Government only document focused on what the Government shall do to assure that the Contractor has performed in accordance with the requirements of the contract.

1.6.3 Federal Government Holidays: The Contractor may work at the Installation on the following Federal Government Holidays provided they make the proper arrangements and it is

agreed upon by the COR. The Contractor shall provide services on Federal Government Holidays if it is necessary in order to execute the PWS.

New Years Day	1st day of January
Martin Luther King Jr.'s Birthday	3rd Monday of January
Presidents Day	3rd Monday of February
Memorial Day	Last Monday of May
Independence Day	4th day of July
Labor Day	1st Monday of September
Columbus Day	2nd Monday of October
Veterans Day	11th day of November
Thanksgiving Day	4th Thursday of November
Christmas Day	25th day of December

1.6.4 Hours of Operation: The Contractor shall conduct business on the Installation as required to complete the activities required to meet the contract requirements in this PWS except when the Government facility is closed due to local or national emergencies, administrative closings, or similar Government directed facility closings. The Contractor shall at all times maintain an adequate workforce for the timely completion of all tasks defined within this PWS. When hiring personnel, the Contractor shall keep in mind that the stability and continuity of the workforce is essential.

1.6.5 Place of Performance: The work to be performed under this contract shall be performed primarily at Hunter Army Airfield, Georgia or the offices of the Contractor

1.6.6 Type of Contract: The Government will award a firm-fixed price contract.

1.6.7 Security Requirements: The Contractor shall meet applicable security requirements to include Anti-Terrorism (AT) and Operational Security (OPSEC) as specified in guidance and regulations as outlined below.

1.6.7.1 AT Level I Training: All Contractor employees, to include subcontractor employees, requiring access Army installations, facilities and controlled access areas shall complete AT Level I awareness training within 60 calendar days after contract start date. The Contractor shall submit certificates of completion for each affected contractor employee and subcontractor employee, to the COR or to the contracting officer 30 calendar days after completion of training by all employees and subcontractor personnel. AT level I awareness training is available at the following website: <https://atlevel1.dtic.mil/at>.

1.6.7.2 Access and General Protection/Security Policy and Procedures: Contractor and all associated sub-contractors employees shall comply with applicable installation, facility and area commander installation/facility access and local security policies and procedures (provided by government representative. Contractor workforce shall comply with all personal identity verification requirements as directed by DOD, Headquarter, Department of Army (HQDA) and/or local policy. In addition to the changes otherwise authorized by the changes clause of this contract, should the Force Protection Condition (FPCON) at any individual facility or installation change, the Government may require changes in contractor security matters or processes.

1.6.7.3 iWATCH Training: Contractor and all associated sub-contractors shall brief all employees on the local iWATCH program (training standards provided by the installation Anti-Terrorism Officer (ATO)). This local developed training will be used to inform employees of the types of behavior to watch for and instruct employees to report suspicious activity to the COR. This training shall be completed within 60 calendar days of contract award and within 60 calendar days of new employees commencing performance with the results reported to the COR no later than (NLT) 60 calendar days after contract award.

1.6.7.4 OPSEC: The Contractor shall develop an OPSEC Standing Operating Procedure (SOP)/Plan within 90 calendar days of contract award, to be reviewed and approved by the responsible Government OPSEC officer, per Army regulation (AR) 530-1, Operations Security. This SOP/Plan will include the Government's critical information, why it needs to be protected, where it is located, who is responsible for it, and how to protect it. In addition, the Contractor shall identify an individual who will be an OPSEC Coordinator. The Contractor shall ensure this individual becomes OPSEC Level II certified per AR 530-1.

In accordance with AR 530-1, Operations Security, new contractor employees shall complete Level I OPSEC training within 30 calendar days of their reporting for duty. All contractor employees shall complete annual OPSEC awareness training.

1.6.7.5 Physical Security: The Contractor shall be responsible for safeguarding all Government equipment, information and property provided for Contractor use. At the close of each work period, Government facilities, equipment, and materials shall be secured.

1.6.7.5.1 Key Control: The Contractor shall establish and implement methods of making sure all keys/key cards issued to the Contractor by the Government are not lost or misplaced and are not used by unauthorized persons. NOTE: All references to keys include key cards. No keys issued to the Contractor by the Government shall be duplicated. The Contractor shall develop procedures covering key control that shall be included in the Quality Control Plan. Such procedures shall include turn-in of any issued keys by personnel who no longer require access to locked areas. The Contractor shall immediately report any occurrences of lost or duplicate keys/key cards to the KO and COR.

In the event keys, other than master keys, are lost or duplicated, the Contractor shall, upon direction of the KO, re-key or replace the affected lock or locks; however, the Government, at its option, may replace the affected lock or locks or perform re-keying. When the replacement of locks or re-keying is performed by the Government, the total cost of re-keying or the replacement of the lock or locks shall be deducted from the monthly payment due the Contractor. In the event a master key is lost or duplicated, all locks and keys for that system shall be replaced by the Government and the total cost deducted from the monthly payment due the Contractor.

The Contractor shall prohibit the use of Government issued keys/key cards by any persons other than the Contractor's employees. The Contractor shall prohibit the opening of locked areas by Contractor employees to permit entrance of persons other than Contractor employees engaged in the performance of assigned work in those areas, or personnel authorized entrance by the KO.

1.6.5.2 Lock Combinations: The Contractor shall establish and implement methods of ensuring that all lock combinations are not revealed to unauthorized persons. The Contractor shall ensure that lock combinations are changed when personnel having access to the combinations no longer have a need to know such combinations. These procedures shall be included in the Contractor's Quality Control Plan.

1.6.6 Special Qualifications: See section C.6 of the Basic Contract.

1.6.7 Post Award Conference/Periodic Progress Meetings: The Contractor shall attend any post award conferences and periodic progress meetings convened by the contracting activity and/or COR. Periodic progress meetings may be conducted periodically to review the Contractor's performance. At these meetings the KO will apprise the Contractor of how the Government views the Contractor's performance and the Contractor shall apprise the Government of problems, if any, being experienced. Appropriate action shall be taken to resolve outstanding issues. These meetings shall be at no additional cost to the Government. The Contractor shall provide meeting minutes within seven calendar days after each meeting for review by the KO and COR.

1.6.8 Contracting Officer Representative (COR): The COR will be identified by separate letter. The COR monitors all technical aspects of the contract and assists in contract administration. The COR is authorized to perform the following functions: assure that the Contractor performs the technical requirements of the contract; perform inspections necessary in connection with contract performance; maintain written and oral communications with the Contractor concerning technical aspects of the contract; issue written interpretations of technical requirements, including Government drawings, designs, and specifications; monitor Contractor's performance and notify both the KO and Contractor of any discrepancies; coordinate availability of Government furnished property; and facilitate site entry of Contractor personnel. A letter of designation issued to the COR, a copy of which is sent to the Contractor, states the responsibilities and limitations of the COR, especially with regard to changes in cost or price, estimates or changes in delivery dates. The COR is not authorized to change any of the terms and conditions of the resulting order.

1.6.9 Certification and Approval of Project Milestones and Deliverables: The COR will be responsible for contract management, inspection, oversight, review, and approval activities. Certification and approval of project milestones by the COR is necessary before distribution of payments. Final acceptance of milestone completion shall include appropriate acceptance of site remediation documentation by regulators. Certification by the Army is contingent upon the Contractor performing in accordance with the terms and conditions of the contract.

1.6.10 Key Personnel: See Section C.6 of the Basic Contract.

1 Identification of Contractor Employees: The Contractor (to include subcontractors) shall provide each employee an Identification (ID) Badge, which includes at a minimum, the Company Name, Employee Name and a color photo of the employee. ID Badges for Key Personnel shall also indicate their job title. ID Badges shall be worn at all times during which the employee is performing work under this contract. Each Contractor (to include subcontractors)

employees shall wear the ID Badge in a conspicuous place on the front of exterior clothing and above the waist except when safety or health reasons prohibit. The Contractor (to include subcontractors) shall be responsible for collection of ID Badges upon completion of the contract or termination of employee. A listing of issued identification cards shall be furnished to the KO prior to the contract performance date and updated as needed to reflect Contractor and Subcontractor personnel changes. All contract personnel attending meetings, or working in other situations where their Contractor status is not obvious to third parties shall identify themselves as such to avoid creating an impression in the minds of members of the public that they are Government officials.

1.6.12 Supervision of Contractor Employees: The Government will not exercise any supervision or control over Contractor or subcontractor employees while performing work under the contract. Such employees shall be accountable solely to the Contractor, not the Government. The Contractor, in turn, shall be accountable to the Government for Contractor or subcontractor employees.

1.6.13 Contractor Travel: See Section C.8.2 of the Basic Contract.

1.6.14 Other Direct Costs: This category includes travel (outlined in 1.6.14), document reproduction, and shipping expenses associated with providing the environmental remediation services in this PWS.

1.6.15 Data Rights: See Section C.8.9.1 of the Basic Contract. In addition, the Contractor shall ensure that all documents or reports produced by the Contractor are suitably marked as Contractor products or that Contractor participation is appropriately disclosed.

1.6.16 Organizational Conflict of Interest: See Section C.8.12 of the Basic Contract.

1.6.17 Phase In /Phase Out Period: Not applicable.

1.6.18 Stop Work: Section C.8.10.1 of the Basic Contract covers this issue and applies to this task order. Note: CWM, MEC and radiological materials are not anticipated to occur nor covered under the work in this task order.

1.6.19 Environmental Responsibility Considerations: The Contractor shall comply with section C.8.11 of the Basic Contract.

1.6.20 Noncompliance: Any incident of noncompliance noted by the Contractor shall immediately be brought to the attention of the COR and KO telephonically and then by written notice. Nothing in this contract shall relieve the Contractor of its responsibility to comply with applicable laws and regulations.

PART 2 DEFINITIONS & ACRONYMS

2. General: The following definitions and acronyms apply to this task order.

2.1 Definitions: The following definitions apply to this task order.

2.1.1 Approved Variances: Refers to the ability to make in the field revisions to planned field work as outlined in the approved Environmental Investigation Plan. These revisions must be coordinated with COR and may require regulator approval prior to acceptance of change.

2.1.2 Contractor Administrator: The official Government representative delegated authority by the Contracting Officer to administer a contract. This individual is normally a member of the appropriate Contracting/Procurement career field and advises on all technical contractual matters.

2.1.3 Contractor: A supplier or vendor awarded a contract to provide specific supplies or services to the Government. The term used in this contract refers to the prime.

2.1.4 Contracting Officer: A person with authority to enter into, administer, and/or terminate contracts, and make related determinations and findings on behalf of the Government. Note: The only individual who can legally bind the Government.

2.1.5 Contracting Officer Representative: An employee of the U.S. Government appointed by the contracting officer to administer the contract. Such appointment shall be in writing and shall state the scope of authority and limitations. This individual has authority to provide technical direction to the Contractor as long as that direction is within the scope of the contract, does not constitute a change, and has no funding implications. This individual does NOT have authority to change the terms and conditions of the contract.

2.1.6 Defective Service: A service output that does not meet the standard of performance associated with the Performance Work Statement.

2.1.7 Deliverable: Anything that can be physically delivered, but may include non-manufactured things such as meeting minutes or reports.

2.1.8 Government-Furnished Property: Property in the possession of the Government made available to the Contractor to use on this task order.

2.1.9 Key Personnel: Contractor personnel that are evaluated in a source selection process and that may be required to be used in the performance of a contract by the Key Personnel listed in the PWS. When key personnel are used as an evaluation factor in best value procurement, an offer can be rejected if it does not have a firm commitment from the persons that are listed in the proposal.

2.1.10 Physical Security: Actions that prevent the loss or damage of Government property.

2.1.11 Project-Related Information: Includes all previous environmental restoration documentation of a technical nature developed by the Army and previous Army Contractors for the sites specified in this PWS, and all the documentation developed by the Contractor in order to achieve the performance objectives specified in this PWS.

2.1.12 Quality Assurance: The Government procedures to verify that services being performed by the Contractor are acceptable in accordance with established standards and requirements of this contract.

2.1.13 Quality Assurance Specialist: An official Government representative concerned with matters pertaining to the contract administration process and quality assurance/quality control. Acts as technical advisor to the Contracting Officer in these areas.

2.1.14 Quality Assurance Surveillance Plan: An organized written document specifying the surveillance methodology to be used for surveillance of Contractor performance.

2.1.15 Quality Control: All necessary measures taken by the Contractor to assure that the quality of an end product or service shall meet contract requirements.

2.1.16 Subcontractor: One that enters into a contract with a prime Contractor. The Government does not have privity of contract with the subcontractor.

2.1.17 Exit Strategy/Ramp Down Strategy and Optimization: Trend analysis of historical and current data and/or other quantitative (such as future costs to the Army) or qualitative considerations that will lead to a reduction in the requirements themselves or the timeframe in which those requirements are to be achieved in a cost effective manner.

Acronyms: The following acronyms apply to this task order.

AEDB-R	Army Environmental Database - Restoration Module
AR	Army Regulation
AT	Anti-Terrorism
ATO	Anti-Terrorism Officer
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CLIN	Contract Line Item Number
CFR	Code of Federal Regulations
CMR	Contract Manpower Reporting
CONUS	Continental United States (excludes Alaska and Hawaii)
COR	Contracting Officer Representative
CR	Compliance Restoration
CWM	Chemical Warfare Materiel
DA	Department of the Army
DD250	Department of Defense Form 250 (Receiving Report)
DD254	Department of Defense Contract Security Requirement List

DERP	Defense Environmental Restoration Program
DFARS	Defense Federal Acquisition Regulation Supplement
DMDC	Defense Manpower Data Center
DOD	Department of Defense
DOD ELAP	DOD Environmental Laboratory Accreditation Program
DODI	DOD Instruction Number
EMS	Environmental Management System
ERIS	Environmental Restoration Information System
ERMA	Environmental Remediation Multiple Award
FAR	Federal Acquisition Regulation
FFP	Firm Fixed Price
GAEPD	Georgia Environmental Protection Division
HAAF	Hunter Army Airfield
HSI	Hazardous Site Inventory
HQAES	Headquarters Army Environmental Systems
HQDA	Headquarters, Department of Army
HSP	Health and Safety Plan
ID	Identification Badge
IRIS	Integrated Risk Information System
IRP	Installation Restoration Program
KO	Contracting Officer
MCL	Maximum Contaminant Limit
MEC	Munitions and Explosives of Concern
NCP	National Contingency Plan
OCI	Organizational Conflict of Interest
ODC	Other Direct Costs
OPSEC	Operational Security
OSHA	Occupational Safety and Health Administration
P/C	Pollutants or contaminants
PBA	Performance-Based Acquisition
PMP	Project Management Plan
POC	Point of Contact
PP	Proposed Plan
PPE	Personal Protective Equipment
PRS	Performance Requirements Summary
PWS	Performance Work Statement
QA	Quality Assurance
QAP	Quality Assurance Program
QAPP	Quality Assurance Project Plan
QASP	Quality Assurance Surveillance Plan
QC	Quality Control
QCP	Quality Control Plan
RAB	Restoration Advisory Board
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
READ	Repository of Environmental Documents

RfD	Reference Dose
RI/FS	Remedial Investigation/Feasibility Study
RIP	Remediation in Place
ROD	Record of Decision
ROE	Right of Entry
RTOP	Request for Task Order Proposal
SAP	Sampling and Analysis Plan
SARA	Superfund Amendments and Reauthorization Act
SC	Site Closeout
SOP	Standard Operating Procedure
TCE	Trichloroethylene
SSHP	Site Safety and Health Plan
TE	Technical Exhibit
TRC	Technical Review Committee
USACE EMCX	United States Army Corps of Engineers Environmental and Munitions Center of Expertise
UFP-QAPP	Uniform Federal Policy for Quality Assurance Project Plans
USEPA	United State Environmental Protection Agency

PART 3 GOVERNMENT-FURNISHED PROPERTY, EQUIPMENT, AND SERVICES

3. Government Furnished Resources: The Government will comply with Section C.8.3 of the Basic Contract.

The Government will furnish space for all meetings.

PART 4
CONTRACTOR FURNISHED ITEMS AND SERVICES

4. Contractor Furnished Items and Responsibilities: The Contractor shall possess and supply all the required expertise, knowledge, equipment, tools and any other resources required to meet or exceed the Army's requirements/objectives identified in this PWS in accordance with established industry standards. The Contractor shall obtain all permits, licenses, approvals, and/or certificates required or necessary to accomplish the work. When the work to be performed requires facility clearances, such as digging or drilling permits, the Contractor shall obtain such clearances and/or permits, with the assistance of the installation point of contact, prior to any drilling or excavating operations. The Contractor shall coordinate all such work with Installation maintenance personnel prior to performing work. Contractors on environmental sites shall perform their own utility checks based on Installation-supplied utility maps. The Contractor shall comply with all Installation or site-specific time and procedural requirements (Federal, state, and local) described in the permits obtained. The Contractor shall provide the necessary personnel and equipment to execute this PWS successfully. The Contractor shall determine the requirements for licensed professionals and certifications and provide all required training necessary for compliance with regulations. The Contractor shall provide all support activities necessary to ensure the safe and effective accomplishment of all work.

In addition, the Contractor shall be responsible for the items listed in Section C.8.4 of the Basic Contract and the following items:

- All solid waste generated under this contract shall be the responsibility of the Contractor. This includes removal, proper disposal, and all required associated paperwork.
- The Contractor shall be responsible for any damage caused to property of the United States (Federal property) by the activities of the Contractor under this contract and shall exercise due diligence in the protection of all property located on the premises against fire or damage from any and all other causes. Any property of the United States damaged or destroyed by the Contractor incident to the exercise of the privileges herein granted shall be promptly repaired or replaced by the Contractor to a condition satisfactory to the COR or reimbursement is to be made by the Contractor sufficient to restore or replace the property to a condition satisfactory to the COR.
- Access to all sites will require coordination with HAAF tenants; the Contractor shall work jointly with Army personnel to accomplish appropriate coordination.
- A dig permit shall be required for any intrusive work on HAAF. Dig permit review and approval typically requires at least ten business days.
- Coordination with the Army/COR and the Installation in order to gain access to available infrastructure (e.g., buildings, roadways, waste management units, other Installation facilities) and utilities (e.g., electric power and telephone lines, natural gas and water

supply distribution pipelines, and wastewater discharge conveyances), to execute this PWS.

- Meeting space, audiovisual equipment for all meetings including the RAB should one be constituted in the future.
- The provision and cost of all utilities associated with this task order.
- Any other necessary resources needed to achieve the performance objective of this PWS.

Comment [khg3]: At this point, is there a RAB? There doesn't appear to be from a note elsewhere in the document. Recommend you rephrase this to, "... including a RAB should one be constituted in the future."

Comment [jpb4]: In Part 5 PWS changed to address legal comment

PART 5
SPECIFIC TASKS

5. Specific Tasks: The specific tasks required to meet the contract requirements of this task order include all of the items in the Environmental Remediation Multiple Award(ERMA) Basic Contract PWS except as noted below:

5.1 Performance Thresholds: The following performance thresholds apply to this task order.

5.1.1 Project Management: The Contractor shall comply with Section C.4 of the Basic Contract. The Contractor shall update the PMP annually or more frequently, as warranted. The performance threshold for project management is there shall be no schedule slippage deemed the fault of the contractor for which the Contractor does not present a viable plan to make up the lost time.

5.1.2 Health and Safety Requirements: The Contractor shall comply with Section C.5.7.1 of the Basic Contract. The performance threshold for this health and safety requirements is zero Class C safety violations where the contractor is determined at fault.

5.1.3 Approval of Deliverables: The Contractor shall comply with Sections C.5.17 of the Basic Contract regarding approval of the deliverables. All documents shall be produced with at least draft, draft-final, and final versions except the PMP. The performance threshold for approvals is there may be no more than two (2) revisions of deliverables for either Army or Regulator comments.

5.1.4 Site Plans: The Contractor shall comply with Section 5.12 of the Basic Contract. The performance threshold for fieldwork activities is 100% compliance with the Final Plans and SAP, and the approved variances.

5.1.5 Analytical Quality Control: The Contractor shall comply with Section C.5.9 of the Basic Contract. The performance threshold for sample results is 100% compliance with Quality Assurance/Quality Control (QA/QC) requirements established in the approved Quality Assurance Project Plan (QAPP) and Sampling and Analysis Plan (SAP).

5.2 Project Information Repositories and Administrative Record: the Contractor shall comply with Section C.5.10 of the Basic Contract. The Project Information Repository is currently maintained at Fort Stewart, Office of the DPW. The Administrative Record/Information Repositories for DERP activities are located at Fort Stewart, Office of the DPW.

5.3 Army Environmental Database and Environmental Restoration Information System: The Basic Contract Section C.5.11 describes these requirements. The Army is transitioning to a new database system, Headquarters Army Environmental Systems (HQAES). The Army, through the COR, will provide data specifications for the systems as warranted. The Contractor shall comply with all applicable requirements for data validation and submission.

5.4 Project Stakeholders and Regulatory Involvement: The Basic Contract Sections 5.14 and 5.15 describe these requirements. For this task order, project stakeholders and the Regulators involved pursuant to Section C.5.14 and C.15 of the Basic Contract include the Army and the Georgia Environmental Protection Division (GAEPD).

5.5 Public Involvement: The Basic Contract Section 5.16 describes this requirement. The contractor shall provide personnel who can (1) effectively present complex technical issues to the U.S. Government personnel; (2) present the U.S. Government's position to public and media officials regarding those issues, and (3) possess the necessary technical skills to execute the activities included under the TO. In addition, the Contractor shall provide presentations of data or attend meetings to discuss the work completed in this task order. The Contractor shall make no public announcements or disclosures relative to information contained or developed under this contract, except as requested by the COR. This also applies to U.S. Government-owned information made available to the Contractor.

At this time, there is not sufficient community interest to establish and sustain a RAB or Technical Review Committee (TRC) for either site. The Installation will conduct biannual public interest assessments and, if the assessments indicate adequate public interest exists, will establish a RAB and activities required to support the RAB meetings will be required.

The Contractor shall be responsible for developing/updating a Community Relations Plan (CRP) for the Installation every 3 years (last updated 2012). The deliverable shall be given to the COR and made final through Army approval through the COR and Regulator concurrence (e.g., formal documentation accepting the reviews and any corrections).

5.6 Contractor's Guarantee and Insurance Specifications: Section C.8.5 and C.8.6 covering the Contractor's Guarantee and Insurance Specifications, respectively, do not apply to this task order.

5.7 CERCLA Section 121 (c) five-year review: The Contractor shall not complete the review as it will be completed by the United States Army Corps of Engineers Environmental and Munitions Center of Expertise (USACE EMCX). The Contractor shall be responsible for supporting the completion of the review by, at a minimum, providing the data the USACE EMCX will need in the format specified by the COR; review and comment on the draft and draft-final review reports; and participate in the kick off call, site walk and interviews, if requested by the COR.

5.8 Delivered Equipment: All equipment delivered and installed during this task order shall become property of the U.S. Government at the end of the contract.

APPLICABLE PUBLICATIONS

6. APPLICABLE PUBLICATIONS

6.1 Environmental Requirements: The Contractor shall perform all the necessary environmental remediation work as required to meet the contract requirements of this PWS in a manner that is consistent with the regulatory drivers listed in Section 1.2 of this PWS along with any applicable orders or permits, all previously agreed-upon agreements or guidance at each site, and consistent with all relevant Department of Defense (DoD) and Army policies. The Contractor shall identify applicable Federal, state and local laws and regulations; applicable Installation-specific orders, agreements, or rules; and perform its work in accordance with said authorities.

6.2 Environmental Management System (EMS): The Contractor shall review and fully understand "Executive Order 13423 -- Strengthening Federal Environmental, Energy, and Transportation Management," in particular those requirements pertaining to the EMS. The Contractor shall also be required to submit in writing that they shall review and adhere to the installation's environmental management system, including the environmental policy and significant aspects / impacts. These items will be provided by the COR.

Attachment A

Performance Requirements Summary

Performance Objective	Performance Standards	Performance Threshold	Incentive/Disincentives
Health and Safety: PWS Para 5.1.2. The Contractor shall maintain Health and Safety Requirements.	Compliant with applicable federal, state, and local laws and regulations	Zero Class C safety violations where the contractor is determined at fault.	Trends of less than acceptable performance could result in termination of task order and/or negative CPARs ratings.
Schedule: PWS 5.1.1. The Contractor shall meet the schedule requirements of the PMP that will achieve the Major Milestones and Required Completion dates.	Compliant with this PWS, Regulator, and all applicable federal, state, and local laws and regulations.	No slippage deemed the fault of the contractor for which the Contractor does not present a viable plan to make up the lost time.	Failure to meet the Performance-Based Milestones/Objectives could result in nonpayment, termination of the task order, and/or negative CPARs ratings.
Approvals: PWS 5.1.3. The Contractor shall obtain Army and Regulatory approval of all project deliverables.	Compliant with this PWS, Regulator, and all applicable federal, state, and local laws and regulations.	No more than two (2) revisions of deliverables for either Army or Regulator comments.	Failure to complete compliant documents could result in mission failure or schedule delay which would result in nonpayment for work toward the applicable CLINs, termination of the task order, and/or negative CPARs ratings.

Performance Objective	Performance Standards	Performance Threshold	Incentive/Disincentives
Field Activities: PWS Para 5.1.4. The Contractor shall perform all field work and sampling activities required in this PWS in compliance with accepted industry standards, approved site plans, and Army and Regulatory approvals.	Performed in compliance with the Final Work Plans/SAP. Though field changes are acceptable due to site conditions, these changes must first be approved by the COR, and upon COR's discretion by Regulators.	100% compliance with the Final Plans and SAP, and the approved variances.	If field work is not completed in accordance with the Final Work Plans, SAP and any approved variances, the contractor may be required to re-work/re-sample at their cost to ensure completion of performance objectives. Additionally, failure to receive approval of field changes may result in negative CPARs ratings.
Sample Results: PWS Para 5.1.5. Sample results shall be acceptable to the Army and Regulators.	Sample results shall meet quality assurance goals/requirements to include any applicable SOPs.	100% compliance with QA/QC requirements established in the QAPP and SAP.	Failure to have sample results which fall within QA/QC requirements could result in contractor re-sampling at their cost, schedule delay or mission failure. Failure to meet the Performance-Based Milestones/Objectives could result in nonpayment, termination of the task order, and/or negative CPARs ratings.

WD 05-2141 (Rev.-14) was first posted on www.wdol.gov on 06/25/2013

REGISTER OF WAGE DETERMINATIONS UNDER
THE SERVICE CONTRACT ACT
By direction of the Secretary of Labor

U.S. DEPARTMENT OF LABOR
EMPLOYMENT STANDARDS ADMINISTRATION
WAGE AND HOUR DIVISION
WASHINGTON D.C. 20210

Diane C. Koplewski Division of
Director Wage Determinations

Wage Determination No.: 2005-2141
Revision No.: 14
Date Of Revision: 06/19/2013

States: Georgia, South Carolina

Area: Georgia Counties of Appling, Bacon, Bryan, Bulloch, Candler, Chatham,
Effingham, Evans, Jeff Davis, Liberty, Long, McIntosh, Screven, Tattnall,
Toombs, Wayne
South Carolina Counties of Hampton, Jasper

Fringe Benefits Required Follow the Occupational Listing		
OCCUPATION CODE - TITLE	FOOTNOTE	RATE
01000 - Administrative Support And Clerical Occupations		
01011 - Accounting Clerk I		11.94
01012 - Accounting Clerk II		13.40
01013 - Accounting Clerk III		14.99
01020 - Administrative Assistant		16.85
01040 - Court Reporter		13.33
01051 - Data Entry Operator I		10.82
01052 - Data Entry Operator II		12.82
01060 - Dispatcher, Motor Vehicle		18.34
01070 - Document Preparation Clerk		11.45
01090 - Duplicating Machine Operator		11.45
01111 - General Clerk I		10.83
01112 - General Clerk II		11.82
01113 - General Clerk III		13.26
01120 - Housing Referral Assistant		14.86
01141 - Messenger Courier		10.37
01191 - Order Clerk I		10.77
01192 - Order Clerk II		12.93
01261 - Personnel Assistant (Employment) I		17.24
01262 - Personnel Assistant (Employment) II		20.67
01263 - Personnel Assistant (Employment) III		24.58
01270 - Production Control Clerk		23.11
01280 - Receptionist		10.70
01290 - Rental Clerk		11.58
01300 - Scheduler, Maintenance		11.91
01311 - Secretary I		11.91
01312 - Secretary II		13.33
01313 - Secretary III		14.86
01320 - Service Order Dispatcher		14.92
01410 - Supply Technician		16.85
01420 - Survey Worker		13.73
01531 - Travel Clerk I		12.02
01532 - Travel Clerk II		12.84
01533 - Travel Clerk III		13.86
01611 - Word Processor I		11.68
01612 - Word Processor II		13.13
01613 - Word Processor III		14.69
05000 - Automotive Service Occupations		
05005 - Automobile Body Repairer, Fiberglass		20.50

05010 - Automotive Electrician	16.31
05040 - Automotive Glass Installer	15.44
05070 - Automotive Worker	15.75
05110 - Mobile Equipment Servicer	13.74
05130 - Motor Equipment Metal Mechanic	17.21
05160 - Motor Equipment Metal Worker	15.44
05190 - Motor Vehicle Mechanic	17.21
05220 - Motor Vehicle Mechanic Helper	12.88
05250 - Motor Vehicle Upholstery Worker	14.61
05280 - Motor Vehicle Wrecker	15.44
05310 - Painter, Automotive	16.31
05340 - Radiator Repair Specialist	15.44
05370 - Tire Repairer	10.86
05400 - Transmission Repair Specialist	17.21
07000 - Food Preparation And Service Occupations	
07010 - Baker	11.67
07041 - Cook I	9.98
07042 - Cook II	11.40
07070 - Dishwasher	8.40
07130 - Food Service Worker	9.69
07210 - Meat Cutter	13.03
07260 - Waiter/Waitress	9.39
09000 - Furniture Maintenance And Repair Occupations	
09010 - Electrostatic Spray Painter	18.52
09040 - Furniture Handler	12.95
09080 - Furniture Refinisher	20.14
09090 - Furniture Refinisher Helper	15.40
09110 - Furniture Repairer, Minor	17.71
09130 - Upholsterer	20.14
11000 - General Services And Support Occupations	
11030 - Cleaner, Vehicles	10.63
11060 - Elevator Operator	9.58
11090 - Gardener	13.28
11122 - Housekeeping Aide	9.58
11150 - Janitor	9.58
11210 - Laborer, Grounds Maintenance	10.84
11240 - Maid or Houseman	8.20
11260 - Pruner	10.78
11270 - Tractor Operator	12.46
11330 - Trail Maintenance Worker	10.84
11360 - Window Cleaner	10.44
12000 - Health Occupations	
12010 - Ambulance Driver	15.67
12011 - Breath Alcohol Technician	16.08
12012 - Certified Occupational Therapist Assistant	22.06
12015 - Certified Physical Therapist Assistant	22.06
12020 - Dental Assistant	14.09
12025 - Dental Hygienist	32.84
12030 - EKG Technician	22.85
12035 - Electroneurodiagnostic Technologist	22.85
12040 - Emergency Medical Technician	15.67
12071 - Licensed Practical Nurse I	14.37
12072 - Licensed Practical Nurse II	16.08
12073 - Licensed Practical Nurse III	17.93
12100 - Medical Assistant	12.64
12130 - Medical Laboratory Technician	13.46
12160 - Medical Record Clerk	13.31
12190 - Medical Record Technician	14.89
12195 - Medical Transcriptionist	16.94
12210 - Nuclear Medicine Technologist	35.33
12221 - Nursing Assistant I	10.09

12222 - Nursing Assistant II	11.34
12223 - Nursing Assistant III	12.38
12224 - Nursing Assistant IV	13.89
12235 - Optical Dispenser	17.75
12236 - Optical Technician	13.41
12250 - Pharmacy Technician	15.16
12280 - Phlebotomist	13.89
12305 - Radiologic Technologist	22.50
12311 - Registered Nurse I	22.85
12312 - Registered Nurse II	27.94
12313 - Registered Nurse II, Specialist	27.94
12314 - Registered Nurse III	33.07
12315 - Registered Nurse III, Anesthetist	33.80
12316 - Registered Nurse IV	39.40
12317 - Scheduler (Drug and Alcohol Testing)	19.92
13000 - Information And Arts Occupations	
13011 - Exhibits Specialist I	19.60
13012 - Exhibits Specialist II	24.29
13013 - Exhibits Specialist III	29.71
13041 - Illustrator I	19.60
13042 - Illustrator II	24.29
13043 - Illustrator III	29.71
13047 - Librarian	26.89
13050 - Library Aide/Clerk	12.62
13054 - Library Information Technology Systems Administrator	24.29
13058 - Library Technician	17.42
13061 - Media Specialist I	17.52
13062 - Media Specialist II	19.60
13063 - Media Specialist III	21.86
13071 - Photographer I	15.24
13072 - Photographer II	17.12
13073 - Photographer III	21.04
13074 - Photographer IV	25.73
13075 - Photographer V	31.13
13110 - Video Teleconference Technician	17.52
14000 - Information Technology Occupations	
14041 - Computer Operator I	15.48
14042 - Computer Operator II	17.25
14043 - Computer Operator III	21.23
14044 - Computer Operator IV	23.62
14045 - Computer Operator V	26.13
14071 - Computer Programmer I	(see 1) 20.15
14072 - Computer Programmer II	(see 1) 26.57
14073 - Computer Programmer III	(see 1)
14074 - Computer Programmer IV	(see 1)
14101 - Computer Systems Analyst I	(see 1)
14102 - Computer Systems Analyst II	(see 1)
14103 - Computer Systems Analyst III	(see 1)
14150 - Peripheral Equipment Operator	15.48
14160 - Personal Computer Support Technician	23.62
15000 - Instructional Occupations	
15010 - Aircrew Training Devices Instructor (Non-Rated)	28.92
15020 - Aircrew Training Devices Instructor (Rated)	34.99
15030 - Air Crew Training Devices Instructor (Pilot)	41.11
15050 - Computer Based Training Specialist / Instructor	28.92
15060 - Educational Technologist	24.24
15070 - Flight Instructor (Pilot)	41.11
15080 - Graphic Artist	24.84
15090 - Technical Instructor	21.66
15095 - Technical Instructor/Course Developer	26.49

15110 - Test Proctor	17.47
15120 - Tutor	17.47
16000 - Laundry, Dry-Cleaning, Pressing And Related Occupations	
16010 - Assembler	8.67
16030 - Counter Attendant	8.67
16040 - Dry Cleaner	10.52
16070 - Finisher, Flatwork, Machine	8.67
16090 - Presser, Hand	8.67
16110 - Presser, Machine, Drycleaning	8.67
16130 - Presser, Machine, Shirts	8.67
16160 - Presser, Machine, Wearing Apparel, Laundry	8.67
16190 - Sewing Machine Operator	11.17
16220 - Tailor	11.83
16250 - Washer, Machine	9.17
19000 - Machine Tool Operation And Repair Occupations	
19010 - Machine-Tool Operator (Tool Room)	18.57
19040 - Tool And Die Maker	22.49
21000 - Materials Handling And Packing Occupations	
21020 - Forklift Operator	15.30
21030 - Material Coordinator	23.11
21040 - Material Expediter	23.11
21050 - Material Handling Laborer	14.26
21071 - Order Filler	12.65
21080 - Production Line Worker (Food Processing)	15.30
21110 - Shipping Packer	15.62
21130 - Shipping/Receiving Clerk	15.62
21140 - Store Worker I	11.72
21150 - Stock Clerk	15.90
21210 - Tools And Parts Attendant	15.30
21410 - Warehouse Specialist	15.30
23000 - Mechanics And Maintenance And Repair Occupations	
23010 - Aerospace Structural Welder	24.07
23021 - Aircraft Mechanic I	22.92
23022 - Aircraft Mechanic II	24.07
23023 - Aircraft Mechanic III	25.27
23040 - Aircraft Mechanic Helper	17.16
23050 - Aircraft, Painter	21.75
23060 - Aircraft Servicer	19.45
23080 - Aircraft Worker	20.56
23110 - Appliance Mechanic	18.50
23120 - Bicycle Repairer	13.66
23125 - Cable Splicer	20.30
23130 - Carpenter, Maintenance	16.38
23140 - Carpet Layer	17.58
23160 - Electrician, Maintenance	21.23
23181 - Electronics Technician Maintenance I	21.54
23182 - Electronics Technician Maintenance II	22.76
23183 - Electronics Technician Maintenance III	24.04
23260 - Fabric Worker	16.33
23290 - Fire Alarm System Mechanic	19.62
23310 - Fire Extinguisher Repairer	15.17
23311 - Fuel Distribution System Mechanic	18.45
23312 - Fuel Distribution System Operator	14.70
23370 - General Maintenance Worker	15.94
23380 - Ground Support Equipment Mechanic	22.92
23381 - Ground Support Equipment Servicer	19.45
23382 - Ground Support Equipment Worker	20.56
23391 - Gunsmith I	15.17
23392 - Gunsmith II	17.58
23393 - Gunsmith III	19.62
23410 - Heating, Ventilation And Air-Conditioning	19.62

Mechanic	
23411 - Heating, Ventilation And Air Contditioning	20.62
Mechanic (Research Facility)	
23430 - Heavy Equipment Mechanic	22.69
23440 - Heavy Equipment Operator	19.62
23460 - Instrument Mechanic	21.25
23465 - Laboratory/Shelter Mechanic	18.57
23470 - Laborer	14.26
23510 - Locksmith	18.57
23530 - Machinery Maintenance Mechanic	23.45
23550 - Machinist, Maintenance	22.08
23580 - Maintenance Trades Helper	13.28
23591 - Metrology Technician I	21.25
23592 - Metrology Technician II	22.32
23593 - Metrology Technician III	23.43
23640 - Millwright	20.82
23710 - Office Appliance Repairer	19.44
23760 - Painter, Maintenance	18.57
23790 - Pipefitter, Maintenance	19.62
23810 - Plumber, Maintenance	18.57
23820 - Pneudraulic Systems Mechanic	19.62
23850 - Rigger	19.62
23870 - Scale Mechanic	17.58
23890 - Sheet-Metal Worker, Maintenance	19.62
23910 - Small Engine Mechanic	17.58
23931 - Telecommunications Mechanic I	23.83
23932 - Telecommunications Mechanic II	25.05
23950 - Telephone Lineman	20.38
23960 - Welder, Combination, Maintenance	18.65
23965 - Well Driller	19.62
23970 - Woodcraft Worker	19.62
23980 - Woodworker	15.17
24000 - Personal Needs Occupations	
24570 - Child Care Attendant	9.31
24580 - Child Care Center Clerk	12.75
24610 - Chore Aide	9.45
24620 - Family Readiness And Support Services Coordinator	12.85
24630 - Homemaker	14.19
25000 - Plant And System Operations Occupations	
25010 - Boiler Tender	21.46
25040 - Sewage Plant Operator	16.82
25070 - Stationary Engineer	21.46
25190 - Ventilation Equipment Tender	14.20
25210 - Water Treatment Plant Operator	16.82
27000 - Protective Service Occupations	
27004 - Alarm Monitor	14.01
27007 - Baggage Inspector	10.55
27008 - Corrections Officer	17.25
27010 - Court Security Officer	17.41
27030 - Detection Dog Handler	13.87
27040 - Detention Officer	17.25
27070 - Firefighter	17.11
27101 - Guard I	10.55
27102 - Guard II	13.87
27131 - Police Officer I	17.71
27132 - Police Officer II	19.68
28000 - Recreation Occupations	
28041 - Carnival Equipment Operator	10.84
28042 - Carnival Equipment Repairer	11.56
28043 - Carnival Equipment Worker	8.70

28210 - Gate Attendant/Gate Tender	15.40
28310 - Lifeguard	11.59
28350 - Park Attendant (Aide)	17.23
28510 - Recreation Aide/Health Facility Attendant	12.82
28515 - Recreation Specialist	15.61
28630 - Sports Official	13.72
28690 - Swimming Pool Operator	14.35
29000 - Stevedoring/Longshoremen Occupational Services	
29010 - Blocker And Bracer	18.94
29020 - Hatch Tender	18.94
29030 - Line Handler	18.94
29041 - Stevedore I	17.59
29042 - Stevedore II	20.00
30000 - Technical Occupations	
30010 - Air Traffic Control Specialist, Center (HFO) (see 2)	35.77
30011 - Air Traffic Control Specialist, Station (HFO) (see 2)	24.66
30012 - Air Traffic Control Specialist, Terminal (HFO) (see 2)	27.16
30021 - Archeological Technician I	16.69
30022 - Archeological Technician II	18.67
30023 - Archeological Technician III	23.13
30030 - Cartographic Technician	22.77
30040 - Civil Engineering Technician	21.31
30061 - Drafter/CAD Operator I	16.69
30062 - Drafter/CAD Operator II	18.67
30063 - Drafter/CAD Operator III	20.82
30064 - Drafter/CAD Operator IV	25.61
30081 - Engineering Technician I	15.31
30082 - Engineering Technician II	17.18
30083 - Engineering Technician III	19.22
30084 - Engineering Technician IV	23.78
30085 - Engineering Technician V	29.14
30086 - Engineering Technician VI	25.35
30090 - Environmental Technician	22.79
30210 - Laboratory Technician	20.97
30240 - Mathematical Technician	23.13
30361 - Paralegal/Legal Assistant I	18.28
30362 - Paralegal/Legal Assistant II	22.66
30363 - Paralegal/Legal Assistant III	26.08
30364 - Paralegal/Legal Assistant IV	31.56
30390 - Photo-Optics Technician	23.14
30461 - Technical Writer I	23.13
30462 - Technical Writer II	28.30
30463 - Technical Writer III	34.24
30491 - Unexploded Ordnance (UXO) Technician I	22.74
30492 - Unexploded Ordnance (UXO) Technician II	27.51
30493 - Unexploded Ordnance (UXO) Technician III	32.97
30494 - Unexploded (UXO) Safety Escort	22.74
30495 - Unexploded (UXO) Sweep Personnel	22.74
30620 - Weather Observer, Combined Upper Air Or (see 2)	20.82
Surface Programs	
30621 - Weather Observer, Senior (see 2)	23.13
31000 - Transportation/Mobile Equipment Operation Occupations	
31020 - Bus Aide	11.24
31030 - Bus Driver	14.05
31043 - Driver Courier	13.68
31260 - Parking and Lot Attendant	9.21
31290 - Shuttle Bus Driver	13.68
31310 - Taxi Driver	10.86
31361 - Truckdriver, Light	13.68
31362 - Truckdriver, Medium	14.55
31363 - Truckdriver, Heavy	18.76

31364 - Truckdriver, Tractor-Trailer	18.76
99000 - Miscellaneous Occupations	
99030 - Cashier	8.11
99050 - Desk Clerk	9.12
99095 - Embalmer	22.74
99251 - Laboratory Animal Caretaker I	11.15
99252 - Laboratory Animal Caretaker II	11.72
99310 - Mortician	22.74
99410 - Pest Controller	14.40
99510 - Photofinishing Worker	11.95
99710 - Recycling Laborer	13.65
99711 - Recycling Specialist	16.17
99730 - Refuse Collector	12.67
99810 - Sales Clerk	11.19
99820 - School Crossing Guard	11.23
99830 - Survey Party Chief	18.50
99831 - Surveying Aide	11.56
99832 - Surveying Technician	15.85
99840 - Vending Machine Attendant	11.62
99841 - Vending Machine Repairer	13.94
99842 - Vending Machine Repairer Helper	11.62

ALL OCCUPATIONS LISTED ABOVE RECEIVE THE FOLLOWING BENEFITS:

HEALTH & WELFARE: \$3.81 per hour or \$152.40 per week or \$660.40 per month

VACATION: 2 weeks paid vacation after 1 year of service with a contractor or successor; 3 weeks after 8 years, and 4 weeks after 20 years. Length of service includes the whole span of continuous service with the present contractor or successor, wherever employed, and with the predecessor contractors in the performance of similar work at the same Federal facility. (Reg. 29 CFR 4.173)

HOLIDAYS: A minimum of ten paid holidays per year, New Year's Day, Martin Luther King Jr's Birthday, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day, and Christmas Day. (A contractor may substitute for any of the named holidays another day off with pay in accordance with a plan communicated to the employees involved.) (See 29 CFR 4174)

THE OCCUPATIONS WHICH HAVE NUMBERED FOOTNOTES IN PARENTHESES RECEIVE THE FOLLOWING:

1) COMPUTER EMPLOYEES: Under the SCA at section 8(b), this wage determination does not apply to any employee who individually qualifies as a bona fide executive, administrative, or professional employee as defined in 29 C.F.R. Part 541. Because most Computer System Analysts and Computer Programmers who are compensated at a rate not less than \$27.63 (or on a salary or fee basis at a rate not less than \$455 per week) an hour would likely qualify as exempt computer professionals, (29 C.F.R. 541.400) wage rates may not be listed on this wage determination for all occupations within those job families. In addition, because this wage determination may not list a wage rate for some or all occupations within those job families if the survey data indicates that the prevailing wage rate for the occupation equals or exceeds \$27.63 per hour conformances may be necessary for certain nonexempt employees. For example, if an individual employee is nonexempt but nevertheless performs duties within the scope of one of the Computer Systems Analyst or Computer Programmer occupations for which this wage determination does not specify an SCA wage rate,

then the wage rate for that employee must be conformed in accordance with the conformance procedures described in the conformance note included on this wage determination.

Additionally, because job titles vary widely and change quickly in the computer industry, job titles are not determinative of the application of the computer professional exemption. Therefore, the exemption applies only to computer employees who satisfy the compensation requirements and whose primary duty consists of:

(1) The application of systems analysis techniques and procedures, including consulting with users, to determine hardware, software or system functional specifications;

(2) The design, development, documentation, analysis, creation, testing or modification of computer systems or programs, including prototypes, based on and related to user or system design specifications;

(3) The design, documentation, testing, creation or modification of computer programs related to machine operating systems; or

(4) A combination of the aforementioned duties, the performance of which requires the same level of skills. (29 C.F.R. 541.400).

2) AIR TRAFFIC CONTROLLERS AND WEATHER OBSERVERS - NIGHT PAY & SUNDAY PAY: If you work at night as part of a regular tour of duty, you will earn a night differential and receive an additional 10% of basic pay for any hours worked between 6pm and 6am.

If you are a full-time employed (40 hours a week) and Sunday is part of your regularly scheduled workweek, you are paid at your rate of basic pay plus a Sunday premium of 25% of your basic rate for each hour of Sunday work which is not overtime (i.e. occasional work on Sunday outside the normal tour of duty is considered overtime work).

HAZARDOUS PAY DIFFERENTIAL: An 8 percent differential is applicable to employees employed in a position that represents a high degree of hazard when working with or in close proximity to ordnance, explosives, and incendiary materials. This includes work such as screening, blending, dying, mixing, and pressing of sensitive ordnance, explosives, and pyrotechnic compositions such as lead azide, black powder and photoflash powder. All dry-house activities involving propellants or explosives.

Demilitarization, modification, renovation, demolition, and maintenance operations on sensitive ordnance, explosives and incendiary materials. All operations involving regrading and cleaning of artillery ranges.

A 4 percent differential is applicable to employees employed in a position that represents a low degree of hazard when working with, or in close proximity to ordnance, (or employees possibly adjacent to) explosives and incendiary materials which involves potential injury such as laceration of hands, face, or arms of the employee engaged in the operation, irritation of the skin, minor burns and the like; minimal damage to immediate or adjacent work area or equipment being used. All operations involving, unloading, storage, and hauling of ordnance, explosive, and incendiary ordnance material other than small arms ammunition. These differentials are only applicable to work that has been specifically designated by the agency for ordnance, explosives, and incendiary material differential pay.

** UNIFORM ALLOWANCE **

If employees are required to wear uniforms in the performance of this contract (either by the terms of the Government contract, by the employer, by the state or local law, etc.), the cost of furnishing such uniforms and maintaining (by laundering or dry cleaning) such uniforms is an expense that may not be borne by an employee where such cost reduces the hourly rate below that required by the wage determination. The Department of Labor will accept payment in accordance with the following standards as compliance:

The contractor or subcontractor is required to furnish all employees with an

adequate number of uniforms without cost or to reimburse employees for the actual cost of the uniforms. In addition, where uniform cleaning and maintenance is made the responsibility of the employee, all contractors and subcontractors subject to this wage determination shall (in the absence of a bona fide collective bargaining agreement providing for a different amount, or the furnishing of contrary affirmative proof as to the actual cost), reimburse all employees for such cleaning and maintenance at a rate of \$3.35 per week (or \$.67 cents per day). However, in those instances where the uniforms furnished are made of "wash and wear" materials, may be routinely washed and dried with other personal garments, and do not require any special treatment such as dry cleaning, daily washing, or commercial laundering in order to meet the cleanliness or appearance standards set by the terms of the Government contract, by the contractor, by law, or by the nature of the work, there is no requirement that employees be reimbursed for uniform maintenance costs.

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations", Fifth Edition, April 2006, unless otherwise indicated. Copies of the Directory are available on the Internet. A links to the Directory may be found on the WHD home page at <http://www.dol.gov/esa/whd/> or through the Wage Determinations On-Line (WDOL) Web site at <http://wdol.gov/>.

REQUEST FOR AUTHORIZATION OF ADDITIONAL CLASSIFICATION AND WAGE RATE {Standard Form 1444 (SF 1444)}

Conformance Process:

The contracting officer shall require that any class of service employee which is not listed herein and which is to be employed under the contract (i.e., the work to be performed is not performed by any classification listed in the wage determination), be classified by the contractor so as to provide a reasonable relationship (i.e., appropriate level of skill comparison) between such unlisted classifications and the classifications listed in the wage determination. Such conformed classes of employees shall be paid the monetary wages and furnished the fringe benefits as are determined. Such conforming process shall be initiated by the contractor prior to the performance of contract work by such unlisted class(es) of employees. The conformed classification, wage rate, and/or fringe benefits shall be retroactive to the commencement date of the contract. {See Section 4.6 (C) (vi)} When multiple wage determinations are included in a contract, a separate SF 1444 should be prepared for each wage determination to which a class(es) is to be conformed.

The process for preparing a conformance request is as follows:

- 1) When preparing the bid, the contractor identifies the need for a conformed occupation(s) and computes a proposed rate(s).
- 2) After contract award, the contractor prepares a written report listing in order proposed classification title(s), a Federal grade equivalency (FGE) for each proposed classification(s), job description(s), and rationale for proposed wage rate(s), including information regarding the agreement or disagreement of the authorized representative of the employees involved, or where there is no authorized representative, the employees themselves. This report should be submitted to the contracting officer no later than 30 days after such unlisted class(es) of employees performs any contract work.
- 3) The contracting officer reviews the proposed action and promptly submits a report of the action, together with the agency's recommendations and pertinent information including the position of the contractor and the employees, to the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, for review. (See section 4.6(b)(2) of Regulations 29 CFR Part 4).

4) Within 30 days of receipt, the Wage and Hour Division approves, modifies, or disapproves the action via transmittal to the agency contracting officer, or notifies the contracting officer that additional time will be required to process the request.

5) The contracting officer transmits the Wage and Hour decision to the contractor.

6) The contractor informs the affected employees.

Information required by the Regulations must be submitted on SF 1444 or bond paper.

When preparing a conformance request, the "Service Contract Act Directory of Occupations" (the Directory) should be used to compare job definitions to insure that duties requested are not performed by a classification already listed in the wage determination. Remember, it is not the job title, but the required tasks that determine whether a class is included in an established wage determination. Conformances may not be used to artificially split, combine, or subdivide classifications listed in the wage determination.

Appendix B

Document Distribution List

Appendix B: Document Distribution List, Hunter Army Airfield, Georgia

Draft Document Distribution

Technical	Mr. Zsolt Haverland USACE Savannah District 100 W. Oglethorpe Ave. Savannah, GA 31401	1 Hard Copy, 1 Electronic
Ft Stewart/HAAF	Ms. Algeana Stevenson DPW Prevention and Compliance Branch 1550 Frank Cochran Drive, Bldg. 1137 Fort Stewart, GA 31314-4927	2 Hard Copies (3 Hard Copies for USTMP)
ERM/COR	Mr. Paul Higgs U.S. Army Environmental Command 2450 Connell Road, 1st Floor Bldg 2264 Fort Sam Houston, TX 78234-7664	1 Electronic

Draft Final and Final Document Distribution

Technical	Mr. Zsolt Haverland USACE Savannah District 100 W. Oglethorpe Ave. Savannah, GA 31401	1 Hard Copy, 2 Electronic
HAAF	Ms. Algeana Stevenson DPW Prevention and Compliance Branch 1550 Frank Cochran Drive, Bldg. 1137 Fort Stewart, GA 31314-4927	3 Hard Copies, 2 Electronic
ERM/COR	Mr. Paul Higgs U.S. Army Environmental Command 2450 Connell Road, 1st Floor Bldg 2264 Fort Sam Houston, TX 78234-7664	1 Electronic

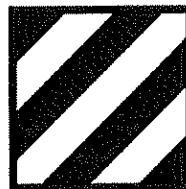
Georgia Environmental Protection Division ¹

USTMP	Mr. William Logan Georgia Environmental Protection Division 4244 International Parkway Suite 104 Atlanta, GA 30334	1 Hard Copy
CERCLA	Ms. Amy Potter Georgia Environmental Protection Division 2 Martin Luther King Jr. Drive Suite 1152, East Tower Atlanta, GA 30334	2 Hard Copies, 2 Electronic Copies

¹ All correspondence and reports will be transmitted to the installation for final submittal to the appropriate regulatory agency.

Appendix C

Quality Control Plan



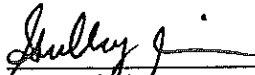
3d Inf Div (Mech)

Final Quality Control Plan

Hunter Army Airfield, Georgia

July 2014




Shelley Gibbons
Project Manager

Final Quality Control Plan

Hunter Army Airfield, Georgia

Prepared for:
U.S. Army Environmental Command

Prepared by:
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Our Ref.:
10153001.0001

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C-1	Key Personnel Resumes
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List of Acronyms and Abbreviations

ARCADIS	ARCADIS US, Inc.
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CLIN	Contract Line Item Number
COR	Contracting Officer's Representative
CSM	Conceptual Site Model
ERMA	Environmental Remediation Multiple Award
FS	Feasibility Study
ft bgs	Feet below ground surface
GAEPD	Georgia Environmental Protection Division
HAAF	Hunter Army Airfield
HSI	Hazardous Site Index
JV	Joint Venture
LTM	Long Term Monitoring
LUC	Land Use Controls
PBA	Performance Based Acquisition
PIKA	PIKA International, Inc.
PMP	Project Management Plan
QA	Quality Assurance
QA/QC	Quality Assurance/Quality Control
QCP	Quality Control Plan
RA-C	Remedial Action-Construction
RAO	Remedial Action Objective
RD/RA	Remedial Design/Remedial Action
RI	Remedial Investigation
ROD	Record of Decision
SSHP	Site-Specific Health and Safety Plan
The JV	PIKA International – ARCADIS U.S., Inc. Joint Venture
TO	Task Order
USAEC	United States Army Environmental Command
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank

1. Introduction

The PIKA International, Inc. (PIKA) - ARCADIS U.S., Inc. (ARCADIS) Joint Venture (the JV) has been retained by the United States Army Environmental Command (USAEC) to perform environmental remediation services at Hunter Army Airfield (hereinafter referred to as HAAF or the "Site"), located in Savannah, Georgia (**Figure 1**). The full scope of services for this performance based acquisition (PBA) contract is defined in Contract W9124J-13-D-0009 Task Order (TO) 0004 which includes all work necessary to achieve performance objectives at the following sites located at HAAF:

- HAA-01 – Fire Training Site;
- HAA-13 – Pump House #1;
- HAA-15 – MCA Barracks Site; and,
- HAA-17 – TCE Groundwater Contamination.

The performance requirements and standards are outlined in **Table 1**.

Table 1 Performance Requirements Summary	
<i>Performance Objective</i>	<i>Performance Standard</i>
Approved Project Management Plan (PMP) <ul style="list-style-type: none"> ▪ Draft PMP within 30 calendar days of contract award. ▪ Final PMP within 30 calendar days of receipt of Contracting Officer's Representative (COR) comments on the Draft Annual update of PMP within 30 calendar days of the anniversary of the award of the contract.	Army approval of the PMP by the COR.
(BASE) Achieve Final Remedial Investigation (RI) and Feasibility Study (FS) Report within 24 months from award of the task order for the following sites: <ul style="list-style-type: none"> ▪ HAA-17: TCE Groundwater Contamination ▪ HAA-15: MCA Barracks Site ▪ HAA-01: Fire Training Site 	Army approval through the COR/Army and written regulatory concurrence (e.g., receipt of Final RI/FS)

Table 1 Performance Requirements Summary	
<i>Performance Objective</i>	<i>Performance Standard</i>
<p>(Option) Complete a Proposed Plan/Record of Decision (ROD) 12 months from award of the Contract Line Item Number (CLIN) or completion of the Final Feasibility Study or which is later:</p> <ul style="list-style-type: none"> ▪ HAA-17: TCE Groundwater Contamination ▪ HAA-15: MCA Barracks Site ▪ HAA-01: Fire Training Site <p>Note: Option may be exercised no later than 60 days following COR approval of the Final FS Report.</p>	<p>Army approval through the COR/Army and Regulatory concurrence (e.g., receipt of Final Proposed Plan and ROD)</p>
<p>(Option) Complete Remedial Design/Remedial Action-Construction (RA-C) at the follow site no later than 12 months from receipt of the Final RODs for the following sites:</p> <ul style="list-style-type: none"> ▪ HAA-01: Fire Training Site ▪ HAA-15: MCA Barracks Site ▪ HAA-17: TCE Groundwater Contamination <p>Note: Option may be exercised no later than 60 days following COR approval of the Draft ROD Report.</p>	<p>Army approval through the COR/Army and Regulatory concurrence (e.g., receipt of Final Remedial design/Remedial Action [RD/RA] and performance reports documenting system performance against Remedial Action Objectives [RAOs]).</p>
<p>(Option) Perform Remedial Action Operation at the following site for 12 months.</p> <ul style="list-style-type: none"> ▪ HAA-01: Fire Training Site ▪ HAA-15: MCA Barracks Site ▪ HAA-17: TCE Groundwater Contamination <p>One option CLIN</p> <p>Note 1: Option CLIN may be exercised no later than 60 days following COR approval of the Draft RA-C Report.</p> <p>Note 2: Upon achievement of response complete, the contractor shall petition Georgia Environmental Protection Division (GAEPD) for removal from the Hazardous Site Inventory (HSI) listing for each site.</p>	<p>Army approval through the COR/Army and Regulatory concurrence (e.g., receipt of required performance reports.</p>

Table 1 Performance Requirements Summary	
<i>Performance Objective</i>	<i>Performance Standard</i>
<p>(Option) Perform any necessary Remedial Action Operations beginning 1 January 2015 and/or Long-term Management (LTM) including applicable system/monitoring network optimization and maintenance, Land Use Control (LUC) inspections and/or maintenance and complete any required effectiveness monitoring reports for the duration of the task order. In addition, the contractor shall provide an exit strategy/ramp down strategy and discuss any optimization efforts completed as part of the annual reports:</p> <ul style="list-style-type: none"> ▪ HAA-13: Pump Houses #1 <p>Annual option CLINs to be exercised for 12 months of effort no later than one year from award of the previous CLIN for an additional 36 months. The final option shall cover 6 months.</p>	<p>Army approval through the COR and Regulatory concurrence (e.g., receipt of documentation confirming RC; RA(O)/LTM exit or ramp down strategy; RA(O)/LTM reports incorporating requirements of the exit or ramp down strategy).</p>
<p>(Option) Develop well abandonment plan for all site-wide wells no longer required to support remediation at this site and remove those wells in accordance with applicable requirements.</p> <p>ONE OPTION CLIN may be exercised no later than 48 months from the award of the task order.</p>	<p>Army approval through the COR and Regulatory concurrence</p>

1.1 Scope

This Quality Control Plan (QCP) applies to all work conducted to support achievement of performance objectives as defined in the Contract W9124J-13-D-0009 TO 0004. This QCP has been developed in accordance with the United States Environmental Protection Agency (USEPA) Requirements for Quality Management Plans (USEPA, 2001) and was designed to describe and incorporate the following elements into project related activities:

- Management and Organization;
- Quality System and Description;
- Personnel Qualification and Training;
- Subcontractor Agreements;

- Documents and Records Management;
- Implementation of Work Processes;
- Assessment Methods; and
- Quality Improvements.

1.2 Purpose

The purpose of this QCP is to make certain that quality assurance and quality control (QA/QC) is an integrated system of management activities that are implemented during project planning, execution, assessment, and reporting (USEPA, 2001). Specifically for the HAAF project, this QCP will be used to ensure the following:

- Technical assessment of the Site and development of decision documents are conducted in accordance with acceptable standards of engineering and scientific practice by project staff;
- The JV personnel understand and adhere to specific roles and responsibilities in regard to work practices and QA/QC functions;
- All work is completed in a manner that meets all applicable local, Army, state, and federal regulations.
- The QA/QC process allows for the identification and correction of work deficiencies or deviations, where necessary.

2. Project Management and Organization

The JV has established a project organization to emphasize command and control, with delegation from the Project Manager to individual key technical personnel. The overall project organization for the HAAF project is shown on **Figure 2**. Specific roles and responsibilities of key JV personnel are described in the following section. Resumes for key personnel are included as **Appendix C-1**.

2.1 Roles and Responsibilities

The project team and organization was designed to provide a streamlined structure to execute the project in the most cost-effective, timely, and technically sound manner as possible. Each position carries with it a well-defined set of responsibilities and authorities, as described in **Table 2**. **Appendix C-1** includes the resumes of the key personnel and several other additional team members.

Table 2: Project Personnel Roles and Responsibilities	
Position	Responsibilities
<u>Project Management</u> Project Manager: Shelley Gibbons	<ul style="list-style-type: none"> Oversees/directs all work for this TO to meet all contractual obligations. Single point of contact for the task order and has overall responsibility for meeting the contract objectives. Leads monthly progress / cost reporting; responsible for meeting the project schedule and/or managing change proactively. Coordinates regulatory negotiations in coordination with the government (with prior approval from the COR) ensuring appropriate JV technical staff is present at partnering meetings to develop and negotiate strategies with the GAEPD and technical experts. Supports Army in all other stakeholder relations efforts, such as public/ Restoration Advisory Board meetings, and provides technical resources to best support these efforts. Establishes and coordinates projects controls (scope, schedule, and budget). Oversees the preparation/submittal of plans/reports and tracks on-time delivery of all submittals. Ensures quality control procedures are followed.
<u>Corporate Oversight</u> Project Director: Lynden Peters	<ul style="list-style-type: none"> Ensures Program Leadership/Direction Defines Client Objective for Contract Interface with USAEC Management & Army Contracting Agency Contracting Personnel Advise Project Manager
<u>Technical Advisor</u> Regulatory Specialist: Richard Collins	<ul style="list-style-type: none"> Point of contact for coordination and resolution of regulatory issues. Ensures project team conducts Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and GAEPD Underground Storage Tank (UST) Management Program services in accordance with all applicable USEPA/GAEPD environmental requirements and policies. Maintains close communication and coordination with the Army to serve as a resource, as needed, for resolution of legal, regulatory, and policy concerns.

Table 2: Project Personnel Roles and Responsibilities	
Position	Responsibilities
<u>Technical Resource</u> Senior Scientist/Engineer: James Bedessem, PE	<ul style="list-style-type: none"> ▪ Responsible for the overall management and implementation of the technical strategy and quality of the task order in coordination with the project manager. ▪ Directs all aspects of the technical approach, assigns technical roles and oversees the implementation of the technical approach. ▪ Directs the RI work and data to provide products to select and implement an appropriate remedy without delay or future ROD reopeners.
<u>Technical Resource</u> Certified Industrial Hygienist (CIH) / Certified Safety Professional (CSP): Tom Burgess, CSP	<ul style="list-style-type: none"> ▪ Responsible for developing, implementing, and overseeing all safety and health for the task order in accordance with EM 385-1-1; reviews and approves site-specific safety and health plan (SSHP) deliverables and ensures procedures are followed. ▪ Assigns site safety officers to lead safety meetings, work stand-downs, and oversee day-to-day safety compliance in the field. ▪ Coordinates safety planning/implementation with the JV and subcontractor staff.
<u>Technical Resource</u> Risk Assessor: Shawn Sager, PhD	<ul style="list-style-type: none"> ▪ Ensures task order risk assessment (human health and ecological) goals are attained. ▪ Ensures data quality objectives align with evaluating risks during RI and FS and evaluates site data and summary from the RI to advise during FS planning. ▪ Performs initial evaluation of the relative degree of risk posed at the sites.

The JV Project Manager, Shelley Gibbons, serves as the primary point of contact with the U.S. Army and the regulatory agencies. She has the responsibility for ensuring that the JV team fully complies with the requirements of the contract. Ms. Gibbons is a registered professional engineer with more than 10 years of project management experience and 15 years working experience in environmental remediation projects. As project manager, Ms. Gibbons will provide the primary project leadership in regard to technical, staffing, regulatory strategy, and scheduling issues. Furthermore, Ms. Gibbons will be responsible for disseminating technical information received from the project team's technical advisors and the regulatory agencies to the project team.

3. Quality System Components

The quality system for the HAAF project encompasses all activities required to meet performance requirements as indicated in the contract. The JV's QA/QC programs are presented in our original Environmental Restoration Multiple Award (ERMA) Contract Proposal dated 7 December 2011, Section 2.7. This Joint Venture (JV) task order will be executed using an integrated quality system which incorporates elements from both JV firms and ultimately manifests itself in the JV-driven program. This will ensure the JV provides the quality of services and deliverables that are necessary to successfully complete the required work and meet performance objectives. Following internal procedures and guidance, the JV will implement proven project-specific systematic approaches in the project planning and execution phase to monitor, control and maintain quality. The Quality System Components include quality checkpoints and metrics for evaluation that will result in high quality deliverables, and include the quality control through project management, project staffing, document review and quality control of RI data, FS results, remedy implementation, and remedial action operations.

Project Planning and Meetings

The Project Manager and Site Managers will be primarily responsible for project planning activities. These individuals will prepare the specific scopes of work for each deliverable and are responsible for providing team members with the necessary plans, procedures, and guidance for each document.

Project meetings will occur throughout the project, at specified dates and as needed to address site specific and overall project activities. Project meetings for HAAF will include the following:

- Periodic meetings with the Army and the GAEPD. The primary purposes of these meetings are to: discuss the preparation status of each document; report comments and proposed responses for draft documents; and, develop site-specific response actions for each site. Monthly progress update reports will also be provided to the Army.
- Internal JV monthly project progress review meetings with operational managers to discuss project status, technical issues, project staffing needs and critical path schedule compliance. The primary objective of these meetings is to make certain that the appropriate JV resource managers are aware of upcoming project needs and the resources are made available to the HAAF Project Manager.

- Internal JV quarterly review meetings with the Federal Programs Manager and Corporate staff to discuss financial performance, project status, technical issues, project staffing needs, and critical path schedule compliance.
- Regular weekly meetings with personnel involved with each site document preparation. These meetings will include, at a minimum the Site Manager and primary authors. Dependent on project and document requirements at the time additional technical resources may also attend.

Technical Review

Project deliverables and fieldwork will have an associated technical review component. Senior technical personnel that have experience and expertise in their specific area of review will conduct the technical review. The Project Manager will assign specific technical review personnel, and it will be their responsibility to make certain that all components of the project have an appropriate technical review assigned. The purpose of the technical reviews will be to ensure document development is on track, proactively evaluate regulatory strategy needs and to identify future challenges that may trigger a project re-plan.

The technical review will address whether the work conducted fulfills the planned scope and was done in accordance with applicable requirements and guidelines. Each FS, Proposed Plan and Decision Document will be prepared consistently across each site utilizing standardized templates which comply with CERCLA, Defense Environmental Restoration Program, and Executive Order 12580. Documents will adhere to the following regulatory guidance documents:

"A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Decision Documents" (July 1999) EPA 540/R-98/031, OSWER 9200.1-23P

"Final Guidance on Administrative Records for Selecting CERCLA Response Actions" (December 1990) OSWER 9833.3A-1

"Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA, Interim Final" (October 1988) EPA 540/G/89/004, OSWER 9355.3-01

"A Guide to Developing and Documenting Cost Estimates During the Feasibility Study" (July 2000) EPA 540-R-00-002, OSWER 9355.0-75

"Scoper's Notes - An RI/FS Costing Guide. Bringing in a Quality RI/FS on Time and Within Budget" (February 1990) EPA/540/G-90/002

"ARARs Q's and A's: General Policy, RCRA, CWA, SDWA, Post-ROD Information and Contingent Waivers" (June 1991) OSWER 9234.2-01FSA

Corporate Quality Assurance

The corporate QA program is designed to provide a separate level and path for project reviews to take place. By design, the QA review process is separate from the primary project management structure. In addition to the monthly review meetings with all project staff, the QA Manager has the authority to conduct independent project audits to make certain that project activities are being conducted in accordance with project planning documents. The QA Manager also has the responsibility of ensuring that QA audits are conducted for field activities, however field activities are not included within the planned scope of work.

Corrective Action

In addition to issues identified by formal audits and/or technical reviews, JV technical personnel are responsible for reviewing their work with regard to project requirements and initiating corrective action measures where necessary. The party conducting the review will document issues identified, and notification will be made to the Project Manager. The Project Manager will be responsible for notifying the QA Manager and initiating corrective action.

Corrective action items identified and the resulting corrective action will be documented and distributed to project personnel. Where non-health and safety items address changes that are considered potentially significant to the project scope, the overall HAAF project team will be notified prior to initiating any changes.

The Quality System Components identified above will ensure the JV provides the quality of services and deliverables that are necessary to successfully complete the required work and meet performance objectives, while mitigating potential risks associated with the execution of the project. Potential risks associated with the task order are summarized in Table 3.

Table 3 Risk Management Matrix		
Risk Identification	Nature of Risk/ Potential Impact	Mitigation Measures
Vapor intrusion assessment within HAA-15	Chlorinated VOC plume beneath existing barracks.	The highest VOC concentrations detected during historical investigations were in deep groundwater at HAA-15. Multiple buildings are located near the groundwater plume. The stratified vertical nature of the plume, characterized by low VOC concentrations within shallow groundwater (10 to 30 feet below ground surface [ft bgs]) that overlies the higher VOC concentrations in deeper groundwater (35 to 50 ft bgs) and presence of the primary plume in areas that are not overlain by existing structures suggest that VI risks will be limited. The partitioning of VOCs present at the water table to soil gas is anticipated to be limited and otherwise mitigated by attenuation mechanisms that would support the dispersion, diffusion, and degradation of these COCs within soil gas. The JV will conduct vapor intrusion modeling to determine the potential for vapor intrusion. If a potential risk is identified, the JV will collect soil gas and/or sub-slab samples to further evaluate the potential risk. If field tests indicate vapor intrusion is an issue, the JV will work with HAAF and GAEPD to develop mitigation measures for the affected buildings.
Supplemental 1,4-dioxane sampling	Detection of 1,4-dioxane above remediation standards.	Any 1,4-dioxane impacts above regulatory standards will be delineated as part of the RI and evaluated in the FS.

Table 3 Risk Management Matrix

Risk Identification	Nature of Risk/ Potential Impact	Mitigation Measures
Acceptance of long-term maintenance and monitoring programs	GAEPD may require a more comprehensive long-term maintenance and monitoring program.	Supplemental groundwater monitoring conducted in support of the RI/FS and completion of the human health risk assessment will provide the technical basis for the remedies proposed at each site. The risk assessments will assess all potentially complete exposure scenarios to demonstrate mitigation by either the proposed remedy or appropriate provisions put in place to specify future site use while soil and/or groundwater impacts are present. The JV will consider the ongoing use of HAAF as an active military base, the associated access restrictions at the facility, and the source of drinking water being derived from either the un-impacted Floridan aquifer or public supply as part of the RI/FS activities. The long-term maintenance and monitoring programs will provide measures for these provisions to remain adequate and demonstrate when they can be lifted. The JV will work with both HAAF and GAEPD to develop these programs and ensure that sampling activities, inspections, and reporting methods demonstrate that requirements are upheld.
GAEPD acceptance of remedial approach	The JVs proposed approaches entail a combination of both active treatment to address the primary COC mass and MNA to manage dilute plume impacts that cannot be managed in a cost-effective manner. GAEPD may require active remediation for an expanded area.	The JV will support the remedial approach by a fully developed conceptual site model (CSM), a robust MNA demonstration as part of the RI/FS, a risk evaluation, and a monitoring program developed in the RD/RA work plan to guide long-term evaluation and assessment of changes in groundwater conditions across the installation. The JV members have worked with the GAEPD to develop similar remedial strategies that include both active and passive components to cost effectively manage remediation activities at other active military installations. The JV will engage the GAEPD in the remedial decision making process, support negotiations over the course of remedial development, and support final approval of the proposed approach.

Table 3 Risk Management Matrix		
Risk Identification	Nature of Risk/ Potential Impact	Mitigation Measures
Delays in Regulatory Reviews	Extensive delays in regulatory reviews can impact the overall project schedule. Based on the number of concurrent PBAs being performed under GAEPD oversight, delays are likely.	The JV will work with all stakeholders to expedite formal approval of work plans and key decision documents. However, when formal approvals are delayed, the JV will evaluate proceeding at risk on allowable activities. To maintain the project schedule, the JV will work with both HAAF and GAEPD to obtain preliminary approvals and mitigate the risks of proceeding on field activities without formal regulatory approval.

4. Personnel Qualifications and Training

The JV has assembled a team of professionals who have the current and relevant skill sets to meet the contract objectives. The team personnel have direct, relevant, and recent experience with CERCLA based closure. A staffing matrix is provided as Table 4 that lists the project team along with their proposed total number of man-hours, associated full time equivalents, qualifications and experience.

Table 4. Staffing Matrix													
Name / Position	Location	Man-hours	Qualifications / Experience										
			Full Time Equivalent (Man-hours / 60 month duration)	Total Years' Experience	Years with JV Member Firms	DOD FFP PBA	GAEPD	USEPA Region 4	CERCLA	RI / FS	PP / ROD	RD / RA-C	RAO / LTM
Shelley Gibbons, Project Manager	NC	581	0.06	15	10	■	■	■	■	■	■	■	■
Jim Bedessem, PE, Senior Scientist/Engineer	FL	110	0.01	24	24	■	■	■	■	■	■	■	■
Shawn Sager, PhD, Risk Assessor	NC	41	0.004	21	18	■	■	■	■	■	■	■	■
Richard Collins, Regulatory Specialist	MD	237	0.02	39	9	■	■	■	■	■	■	■	■
Thomas Burgess, Safety Specialist	NJ	106	0.01	20	12	■	■	■	■	■	■	■	■
Scott Bostian, PE, Task Manger	NC	140	0.01	27	7	■	■	■	■	■	■	■	■
Holly Nelson, Task Manager	FL	140	0.01	13	10	■	■	■	■	■	■	■	■
Eric Killenbeck, Hydrogeologist	PA	120	0.01	15	11	■	■	■	■	■	■	■	■
Chris Spooner, PE, Engineer	VA	250	0.02	11	10	■	■	■	■	■	■	■	■
Jared Fino, Field Geologist	NC	956	0.1	3	3	■	■	■	■	■	■	■	■
Margaret Carte, PG, Field Geologist	CA	560	0.07	20	5	■	■	■	■	■	■	■	■
Average Years Experience and Years with JV Member Firms				18.9	10.8								

5. Subcontractor Agreements

The JV will self-perform much of the work within this contract, however, where needed, subcontractors will be added including services in the following areas:

- Direct Push Technology Sampling
- Monitoring and Injection Well Drilling
- Well Abandonment Services
- Utility Location Clearances
- Surveying, and
- Chemical Laboratory Services

Subcontractors will be selected in accordance with the FAR and in accordance with the contract. All subcontractors will have required certifications and Quality Assurance (QA) oversight will be implemented.

6. Documents and Records Management

Document and records management will encompass all paper and electronic correspondence and reports generated throughout the course of the project. General QC items that will apply to this project include the following:

- Upon finalization of documents, meeting minutes, and other project deliverables, the draft documents will be removed from the project file and will be replaced with the final document. Associated comments from the draft deliverables will be retained in the project file.
- Final deliverables provided in electronic format will be distributed as read-only documents.
- Throughout the life of the project, project documentation will be available for electronic access to only those JV personnel directly involved and/or specifically authorized by the Project Manager to have such access. Electronic and hard copy files will be kept in the central file system maintained in ARCADIS' Raleigh, North Carolina office for preservation purposes. Files will be archived following completion of the project in accordance with contract requirements.

7. Implementation of Work Processes

The processes for implementation of work are described primarily in Section 3 of this document. These items include: project planning and project review process; technical review components, adherence to regulatory guidance documents, the corporate QA function; and the corrective action function based on the direct project review and independent review function of the QA Manager.

8. Assessment Methods

The primary responsibility for assessing the project Quality System and performance will be a collaborative effort between the Project Manager. As discussed in Section 2, the Project Manager will be responsible for the quality review process, either through direct review action or through the assignment of qualified technical representatives (unassociated in a direct technical role in the project). Both the Project Manager and assigned representatives will have full access to project personnel and files.

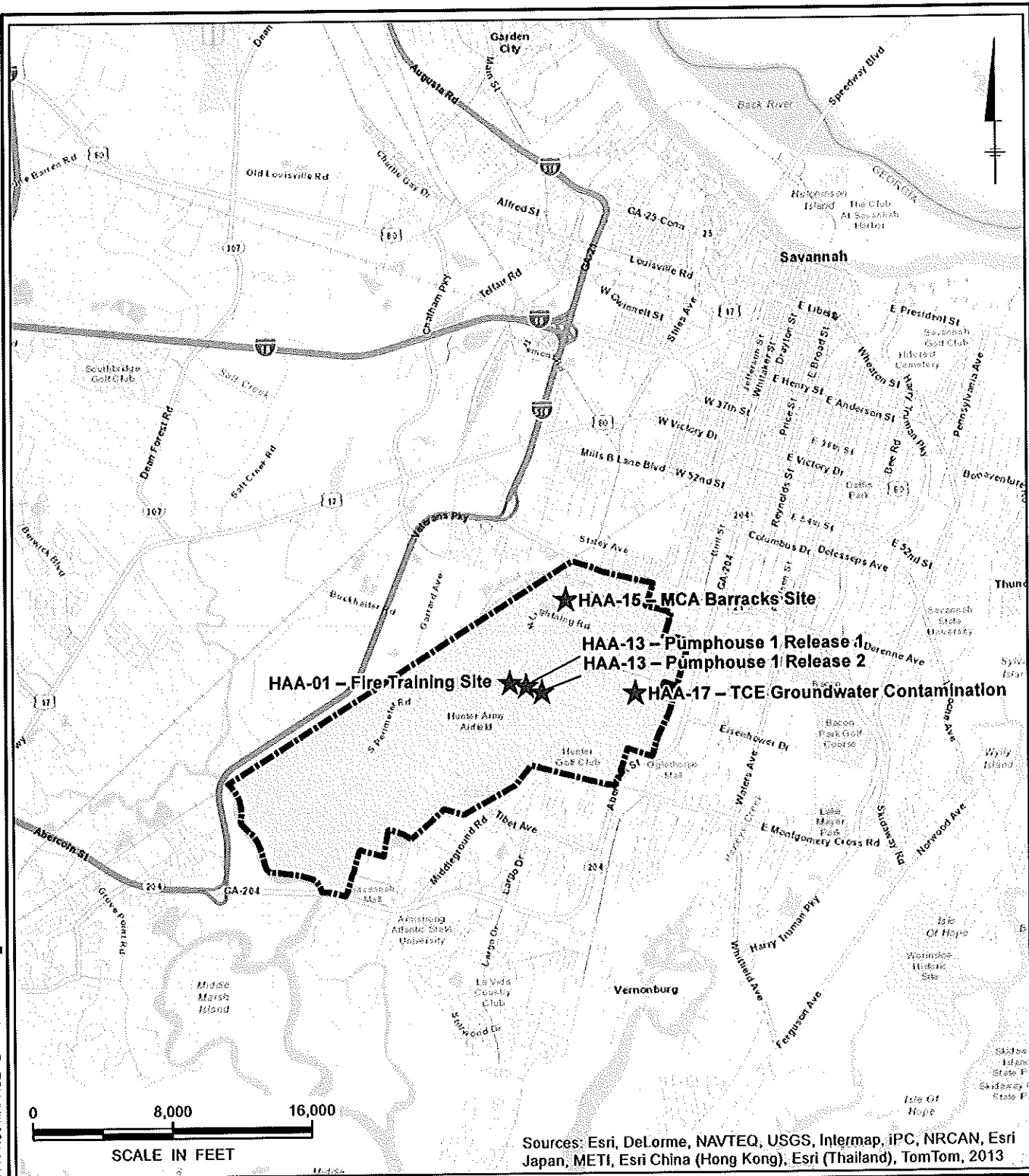
Any corrective action items to be implemented will be discussed at the regularly scheduled HAAF project meeting prior to implementation, if the schedule permits, or the corrective action item will be summarized and forwarded to the project stakeholders prior to implementation.

9. References

U.S. Environmental Protection Agency. 2001. EPA Requirements for Quality Management Plans, EPA QA/R-2. EGA/240/13-01/002. Office of Environmental Information, Washington, DC. March.

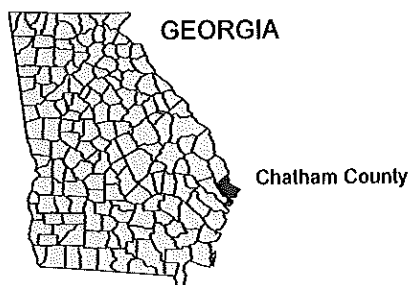
Figures

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Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, iPC, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, 2013

PROJECTION: NAD 1983 StatePlane Georgia East FIPS 1001 Feet



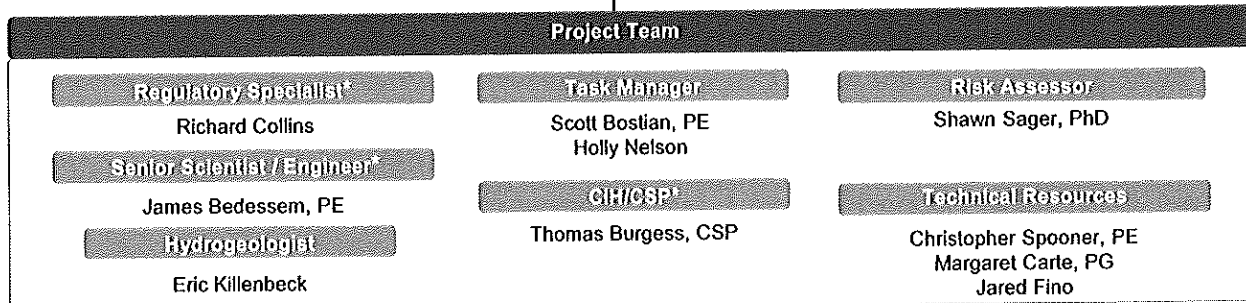
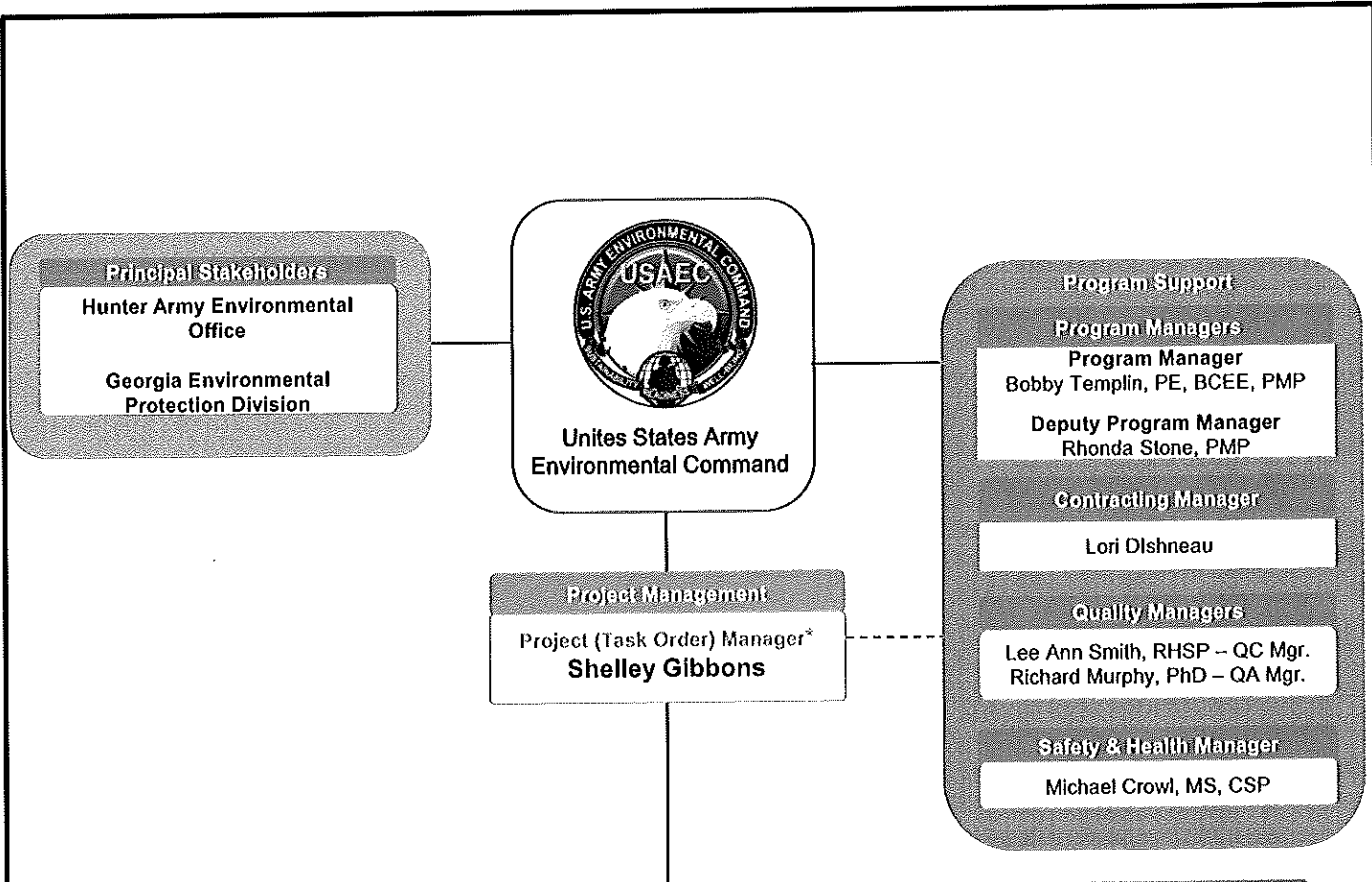
HUNTER ARMY AIRFIELD, GEORGIA

Site Location Map



FIGURE

1



* Indicates KEY PERSONNEL required by PWS

HUNTER ARMY AIRFIELD, GEORGIA

Organization Chart



FIGURE
2



Appendix C-1

Key Personnel Resumes



Project (Task Order) Manager: Shelley Gibbons, PE	
Section C.6.1.1 Minimum Requirements	Meets / Exceeds Requirements
1. Education: BASc/1998	✓Meets
2. Professional Registration: Professional Engineer: SC	✓Meets
3. Minimum 5 years project management experience, with minimum 3 years in environmental remediation projects	✓Exceeds – 10 years ✓Exceeds – 10 years
4. Working knowledge of applicable federal, state, and local laws, regulations, and guidance	✓Meets
5. Experience and/or working knowledge of risk management and/or cost containment insurance if required by the TO	✓Meets
6. Basic understanding of firm fixed-price and cost plus fixed fee contracts	✓Meets
7. Demonstrated understanding of performance-based contracts, and successful experience managing a minimum of one PBA or TO	✓Meets – > \$47in PBAs, during the last 15 years

Ms. Gibbons has over 15 years of environmental engineering experience, which includes remedial investigation, corrective measure studies, implementation of remedial systems, performance and compliance monitoring, database management, water resource management and backflow prevention design.

Relevant Project Experience:

FFP PBA at Fort Stewart/HAAF, GA; USAEC, 09/2008 – 12/2014: Project manager for and regulatory specialist responsible for overseeing the project, client and regulator management, and managing the financials. Phase manager responsible for four sites that included RFI investigations for multiple constituents including petroleum hydrocarbons and VOCs, remediation, and corrective action implementation including excavation, installation, and management of a biosparge system, and MNA. *Value: \$12.7M*

FFP PBA at Tyndall Air Force Base, FL; AFCEC, 07/2013 – 10/2020: Associate project manager responsible for financials, project schedule, progress reports, and assisting with client/regulator management. Phase manager responsible for managing field efforts and preparing CERCLA investigation and closure documents. *Value: \$32M*

FFP PBA at Fort Gordon, GA; USAEC, 9/2001 – 12/2011: Associate project manager and regulatory specialist responsible for assisting with financials, insurance reporting, client/regulator management, coordination of RFI investigations and groundwater monitoring, and preparing corrective action progress reports for chlorinated hydrocarbons. *Value: \$19.5M*

FFP PBA at Fort Jackson, SC; USAEC, 09/2003 – 09/2013: Associate project manager responsible for assisting with financials, insurance reporting, and client/ regulator management and phase manager responsible for eight sites, which included RFI investigations for multiple constituents including petroleum hydrocarbons, VOCs, and SVOCs, remediation, and corrective action implementation including LNAPL recovery, excavation, PermeOx® Plus injections, phytoremediation, and MNA. *Value: \$14.8M*

FFP PBA at Moody AFB, GA; AFCEC, 03/2013 – 2/2019: Phase manager responsible for preparing and implementing corrective action optimization plans at three sites. Optimized remedies include remediation of chlorinated VOCs using in-situ bioremediation with EVO and pH adjustment strategies with sodium hydroxide solutions to buffer groundwater. *Value: \$18M*

Experience Highlights

- Experience collaborating with project teams for design of investigation programs to delineate impacts, development and implementation of remedial strategies, and completion of final activities to facilitate Site closure.
- Engaged in the initial project strategy development, environmental oversight, and stakeholder relations plans and implementation, including working directly with stakeholders.
- Relevant experience includes management of investigation, remediation, and closure of sites under multiple regulatory programs in Georgia.



Senior Scientist/Engineer: James Bedessem, PE

Section C.6.1.1 Minimum Requirements	Meets / Exceeds Requirements
1. Education: MS/Civil Engineering/1990; BS/Civil Engineering/1988	✓ Exceeds – Advanced Degree
2. Professional Registration: Professional Geologist: CO, FL, MN	✓ Meets
3. 10 years of experience in technical leadership for other contracts/programs with 5 years working experience in environmental remediation sites	✓ Exceeds – 20 years ✓ Exceeds – 20 years
4. Knowledge of applicable federal, state, and local laws, regulations, and guidance	✓ Meets
5. Basic understanding of firm fixed-price and cost reimbursable contracts	✓ Meets

Mr. Bedessem is responsible for technical direction and QA/QC of environmental remediation projects throughout the U.S. During his career, he has served in a range of technical and managerial roles, including technical advisor, project manager, design engineer, construction manager, and operations specialist. He is co-author of two books: In-Situ Treatment Technology and Groundwater Treatment Technology. He offers experience in PBA and projects that have encompassed all aspects of hazardous waste management including the evaluation, design, and construction of remedial measures to abate soil and groundwater contamination at CERCLA, RCRA, landfills, dry cleaning, and UST sites.

Experience Highlights

- Technical lead for more than \$250M in PBAs
- Senior engineer for site-wide RI/FS, ROD, RD/RA, and RAO at Milan AAP under a PBA contract with USAEC
- Senior engineer for two Air Force PBA contracts: 1) Moody AFB, GA - environmental remediation of 12 sites including landfills, petroleum sites, fire training areas, and groundwater plumes and 2) Tyndall AFB, FL - RI/FS at 10 MMRP and 3 IRP sites

Relevant Project Experience:

FFP PBA Fort Gordon, GA; USAEC, 09/2001 – 12/2013: Senior engineer and technical advisor for the investigation and remediation of 26 RCRA units at this active DOD installation. Responsible for reviewing remedial progress and providing technical support for site investigation, remedy selection, and remedy implementation for selected sites. Twenty-five of 26 SWMUs received NFA determinations from the state regulators while remedy-in-place was achieved for the 26th site. *Value: \$19.5M*

FFP PBA Milan Army Ammunition Plant, TN, USAEC, 05/2004 – 5/2014: Senior engineer for remediation of soil and groundwater impacts from explosives. Soil activities have included delineation of impacts using biased sampling and composite sampling techniques, excavation or capping of soils impacted with munitions constituents (hexahydro-1,3,5-trinitro- 1,3,5-triazine and TNT), and ex-situ bioremediation of 17,000 tons of soil from across the facility. Groundwater activities include the operation of existing, interim remedial measures consisting of three pump-and-treat systems that extract 4 mgd of contaminated groundwater and development of a final, site-wide remediation strategy. Supplemental characterization to fill data gaps was completed to supplement data collected during the Remedial Investigation. Following completion of the data gap investigation, a site-wide remedy for groundwater has been selected and USEPA Region 4 approved the final FS in December 2013. Proposed Plan and ROD development are underway concurrently with RD activities so that the final site-wide groundwater remedy can be operational by May 2014. *Value: \$49.8M*

FFP PBA Fort Jackson, SC; USAEC, 09/2003 – 09/2013: Senior engineer and technical advisor providing senior review and QA/QC primarily for the remediation of petroleum-related impacts at multiple SWMUs. Under this contract, 16 SWMUs, one AOC, and 13 UST sites were addressed at this active installation. ARCADIS designed remedial actions for two former UST sites with residual petroleum contamination. Oxygen delivery to promote in-situ biodegradation and phytoremediation were selected as the preferred technologies. ARCADIS prepared remedial action plans that were approved by the state regulator. The active implementation phases of the plans have been completed and contractual performance objectives met. *Value: \$14.9M*



Regulatory Specialist: Richard Collins

Section C.6.1.1 Minimum Requirements	Meets / Exceeds Requirements
1. Education: BS/Environmental Resource Management/1974; Dispute resolution training at MIT- Harvard Public Disputes Program (1993)	✓ Meets
2. Ten years' experience in regulatory requirements for other contracts/programs with a minimum of 5 years working experience in environmental remediation sites.	✓ Exceeds – 27 years ✓ Exceeds – 33 years
3. Detailed knowledge of applicable federal, state, and local laws, regulations, and guidance, particularly related to CERCLA, National Contingency Plan, RCRA permits and corrective action, and the DOD/Army	✓ Meets
4. Basic understanding of firm fixed-price and cost plus fixed fee contracts	✓ Meets

Mr. Collins provides regulatory guidance and strategy development for FFP PBA and traditional contracts for federal and commercial clients, developing and advising on innovative approaches to regulatory strategies. As former Director of MDE's Land Management Administration, he provides unique knowledge about State regulatory policies regarding Federal Facilities remediation projects. He offers clients regulatory guidance, advising on USEPA and state environmental policy and compliance approaches, to address current and emerging environmental challenges. As a regulatory strategist, Mr. Collins is engaged in the initial strategy development, technical oversight, and execution of contracts. He is an expert in stakeholder relations, including working with RABs and other public groups.

Experience Highlights

- Former Director of Maryland Department of Environment (MDE) Land Management Administration
- Served as a state regulator for 30 years
- Managed MDE's delegated RCRA (Subtitle C, D, and I), state and federal CERCLA, and all associated remediation programs
- Oversees internal network of regulatory experts for ARCADIS that directly provide strategic regulatory guidance and support for 45 PBAs

Relevant Project Experience:

FFP PBA Projects and Contracts for USAEC, 09/2003– Ongoing:

- Fort Gordon, GA: Closure of 26 RCRA regulated sites. *Value: \$19.5M.*
- Fort Jackson, SC: Closure of 16 solid waste management units and 13 UST sites. *Value: \$14.3M.*
- Milan AAP, TN: RC or RIP at 20 sites, with only one remaining groundwater ROD pending. *Value: \$49.8M.*
- Picatinny Arsenal, NJ: RIP and/or closure for 140+ sites under CERCLA, including all decision documents; *Value: \$27M.*
- White Sands Missile Range, NM: RCRA corrective action decision documents and closures at 39 sites. *Value: \$21.2M.*
- Fort George G. Meade, MD: Remediation of VOC plume at the Defense Reutilization and Marketing Office site. *Value: \$2M.*
- Sierra Army Depot, CA: Closure for seven sites and RIP for two sites. *Value: \$19.7M.*
- Fort Rucker, AL: Response complete for sanitary landfill and site-wide groundwater. *Value: \$1.7M.*

FFP PBA for AOC 50 at Fort Devens, MA; U.S. Army FORSCOM, 09/2001 – 06/2008:
Optimization of existing systems and remediation of AOC 50. *Value: \$7.9M*

FFP PBA Former U.S. Disciplinary Barracks, Lompoc, CA; U.S. Army FORSCOM, 09/2001-12/2006: BRAC closure of five sites under CERCLA, including unpermitted landfill. *Value: \$3.8M*

FFP PBA at Moody AFB, GA; AFCEC, 03/2013 – 2/2019: Eight site closeouts, two remedy-in-place goals, and two regulatory closures for groundwater-impacted sites, including three landfills and two disposal areas. *Value: \$18M*



Certified Industrial Hygienist: Thomas Burgess, CSP

Section C.6.1.1 Minimum Requirements	Meets / Exceeds Requirements
1. Certification by the American Board of Industrial Hygiene	See # 6
2. Education: MBA/Organizational Studies; BS/Management	✓ Exceeds – Advanced Degree
3. Minimum 3 years working experience in environmental remediation site activities	✓ Exceeds – 26 years
4. Demonstrated experience in air monitoring techniques and development of respiratory protection and PPE programs for working in potentially toxic atmospheres and confined spaces	✓ Meets
5. Working knowledge of applicable federal, state, and local occupational safety and health regulations	✓ Meets
6. CSP substitution allowed if they meet qualification requirements 2 – 5	✓ Meets

Mr. Burgess is a health and safety professional with varied experience in managing programs for industrial operations, construction, and environmental remediation. He leads the ARCADIS Federal Health and Safety Oversight program. In this role, he supports a variety of DOD projects and is experienced in the development and management of safety plans IAW EM 385-1-1. His dedication and *Safety First* attitude is reflected in ARCADIS' enviable experience modification rate (EMR) of 0.66.

Experience Highlights

- Developed innovative streamlined APP/SSHP approach for Picatinny Arsenal, NJ sites under an USAEC contract
- Hazwoper 40-hour and 8-hour instructor

Relevant Project Experience:

FFP PBA at Picatinny Arsenal, NJ; USAEC, 04/2006 – 04/2016: Health and safety manager coordinating work at multiple sites on the installation. Related activities include review and approval of the accident prevention plan and site-specific safety and health plan, technical support of field operations, and performance of regular safety audits. *Value: \$27.8M*

FFP Task Order at Fort Detrick, MD; USACE Baltimore, 07/2010 – 03/2014: Health and safety manager performing related activities included review and approval of the accident prevention plan and site-specific safety and health plan, technical support of field operations, and performance of regular safety audits. Mr. Burgess also prepares responses to local residents with health and safety concerns. *Value: \$2.5M*

FFP Site Inspections of Three MMRP Sites and RI/FS at Former Precision Bombing Range N-9, Pueblo of Laguna, NM; USACE Albuquerque District, 01/2013 – 11/2013: Health and safety manager performing related activities for the site inspections on three MMRP areas of concern. *Value: \$540K*

FFP PBA at Fort George G. Meade, MD; USAEC, 08/2009 – 12/2015: Health and safety manager performing related activities including review and approval of the accident prevention plan and site-specific safety and health plan, technical support of field operations, and performance of regular safety audits. *Value: \$18.9M*

Operational Range Assessment Program, Phase II, Active Army and Army National Guard Installations, MD; USACE Baltimore District, 09/2009 – Present: Director of health and safety responsible for approval and oversight of accident prevention plans, and implementation during field activities. He prepares activity hazard analyses and selects appropriate personal protective equipment for project personnel. *Value: \$9.4M*

FFP Closure Verification Sampling at Deseret Chemical Depot, UT; 09/2012 – 12/2020: Health and safety manager supporting team sampling in chemical warfare material storage igloos and the mustard storage yard. Mr. Burgess addresses medical management, personal protective equipment, and other issues related to potential chemical warfare material exposure. *Value: \$1M*



Risk Assessor: Shawn Sager, PhD

Section C.6.1.1 Minimum Requirements	Meets / Exceeds Requirements
1. Education: PGD/ Environmental Science and Public Policy/1983, PhD /Chemistry/1983,; MS /Chemistry/1981,; BS/Chemistry/1978,	✓ Exceeds – Advanced Degree
2. Working knowledge of federal and state regulations, and guidance dealing with risk assessments	✓ Meets
3. Minimum of 3 years working experience in environmental risk assessment activities	✓ Exceeds – 28 years

Dr. Shawn Sager has more than 28 years' experience preparing risk assessments and evaluating hazardous materials including extensive performance based remediation experience with DOD and commercial clients. She has managed, performed and reviewed risk assessments for more than 300 sites in 30 states, including 75 Superfund sites. Dr. Sager is one of nine trainers for the ASTM Risk-Based Corrective Action for petroleum release sites standard.

Relevant Project Experience:

FFP PBA, HAAF and Fort Stewart, GA; USACE, 09/2008 – 12/2014: Risk assessor responsible for coordinating and overseeing risk assessments for sites at both installations. Prepared risk assessments for sites under the Georgia HSRA and RCRA programs. Responsibilities included managing the risk assessment reports, responding to comments, and interfacing with the regulators. *Value: \$12.7M*

FFP PBA at Fort Gordon, GA; USAEC, 09-2001 – 12/2015: Risk assessor responsible for managing the risk assessment and preparing the strategy document. Scope of work included developing a strategy to obtain closure for solid waste management unit. The strategy document was developed early in the process to obtain a state regulatory agency's concurrence for the approach and assumptions that were used to characterize potential exposure and risk. The approach has been successfully implemented and 26 of 28 contracted SWMUs have been closed using the risk based approaches. *Value: \$19.5M*

FFP PBA at Fort Jackson, SC; USAEC, 09/2003 – 09/2013: Risk assessor responsible for coordinating and overseeing risk assessment to address 16 SWMUs, one AOC and four UST sites. Responsibilities included reviewing reports prepared under existing contracts and providing comments to communicate results that aid in obtaining closure of the SWMUs. The project was run primarily through the RCRA corrective action program, but also included some sites under the state risk-based corrective action program for petroleum contamination. *Value: \$14.9M*

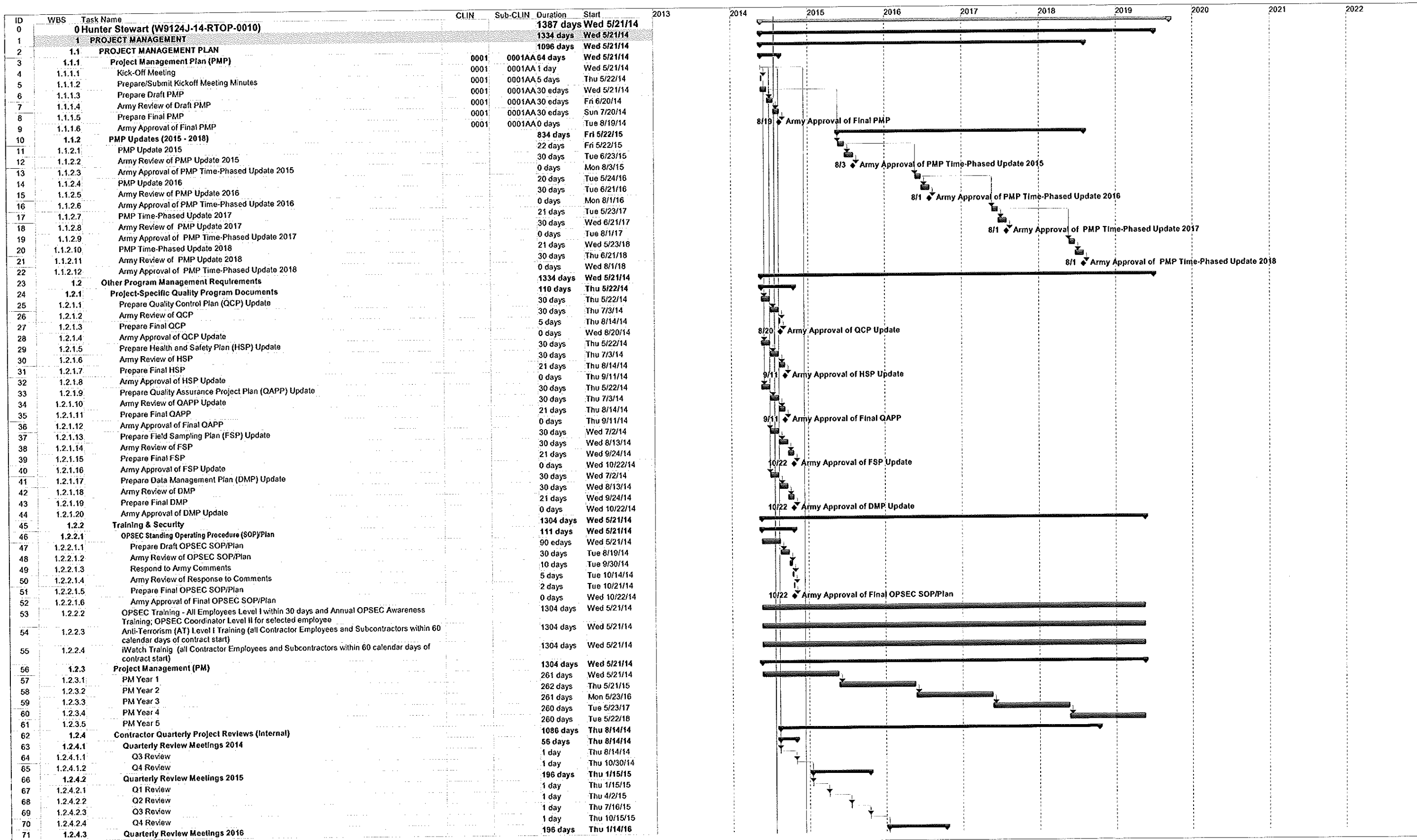
FFP PBA at Fort Leavenworth, KS; USACE Omaha District, 03/2002 - 09/2012: Risk assessor responsible for coordinating and preparing the human health risk assessment (HHRA) for FTL-66, 5th Artillery Road Firing Range, munitions response site. The RFI and risk assessment focused on delineating lead concentrations and evaluating exposure to lead as the site is used for base housing and the housing footprint is expanded. The assessment also evaluated exposure to other constituents detected in at the site, although lead was the risk driver. Supported the project team on other Fort Leavenworth sites, serving as a peer reviewer and quality control member. *Value: \$19.8M*

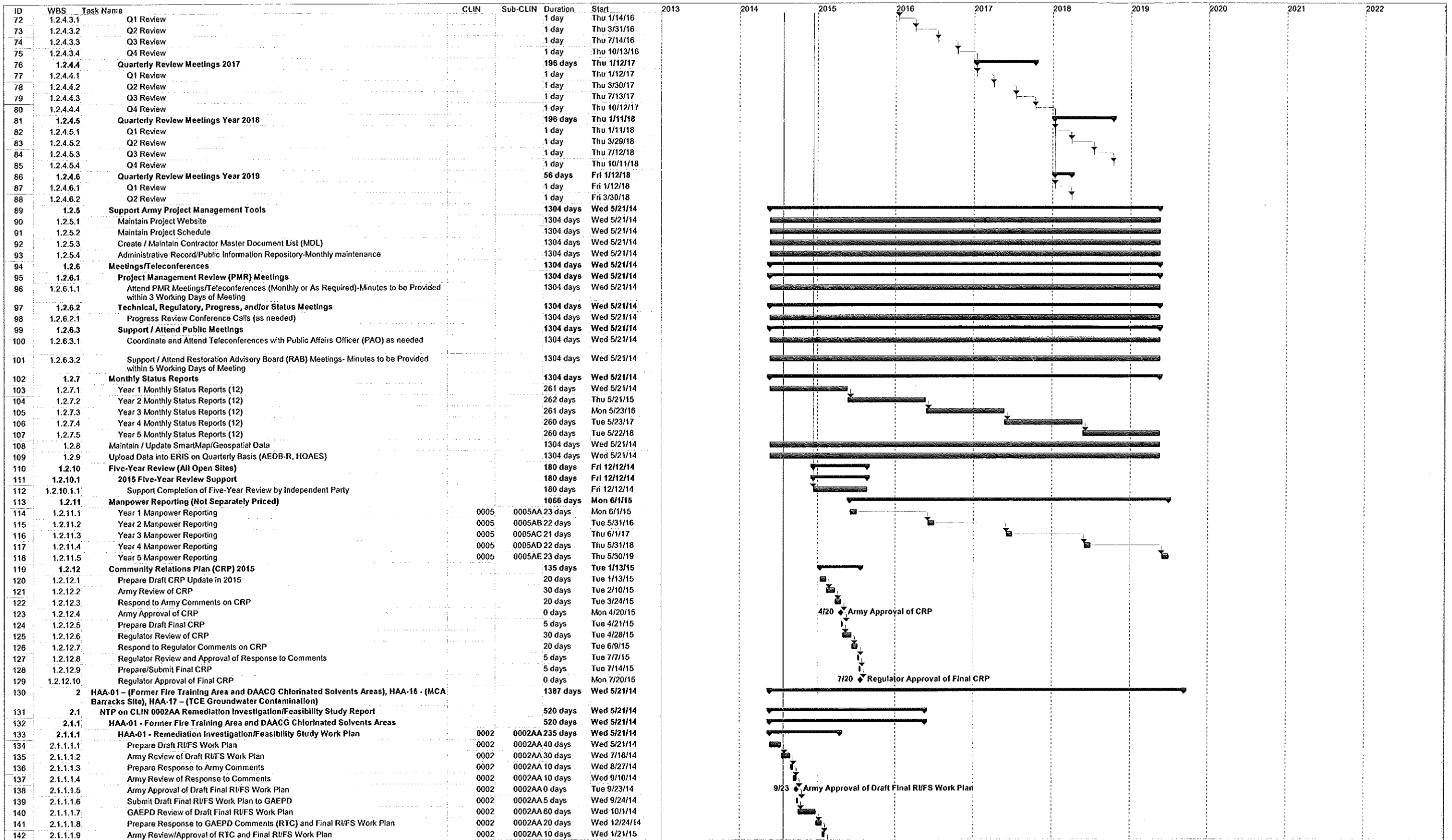
Experience Highlights

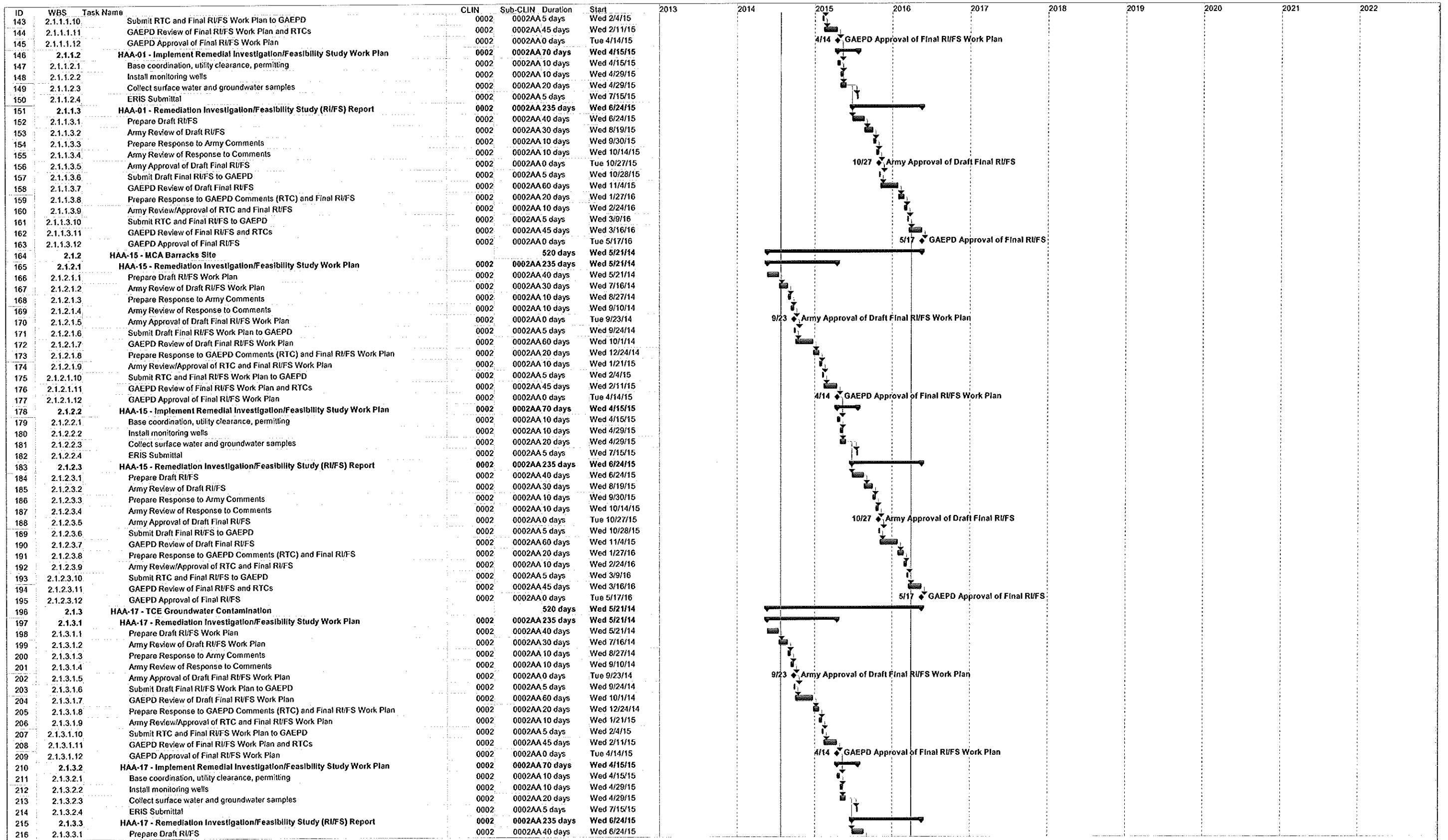
- 28+ years' experience conducting risk assessments to support regulatory closure decision making
- Successfully managed large and complex RA projects under a variety of regulatory frameworks, including multiple state and federal CERCLA and RCRA corrective actions
- Performed multi-pathway, multi-receptor HHRAs at a variety of sites including military facilities, landfills, and various petroleum and chlorinated solvent spill sites
- Knowledgeable on emerging toxicity and science for variety of compounds including lead, chromium, perchlorate, and exposure pathways including vapor intrusion

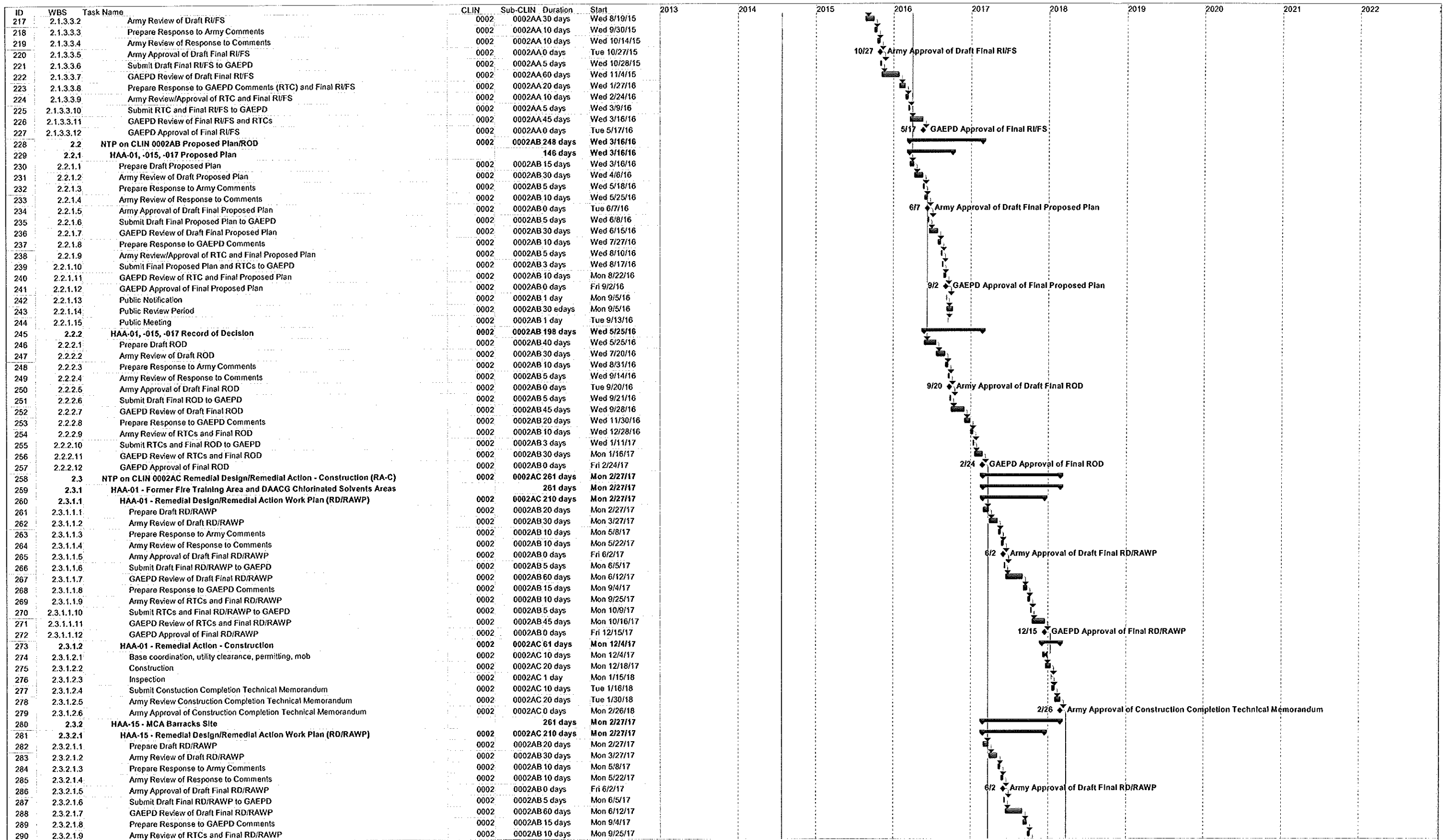
Appendix D

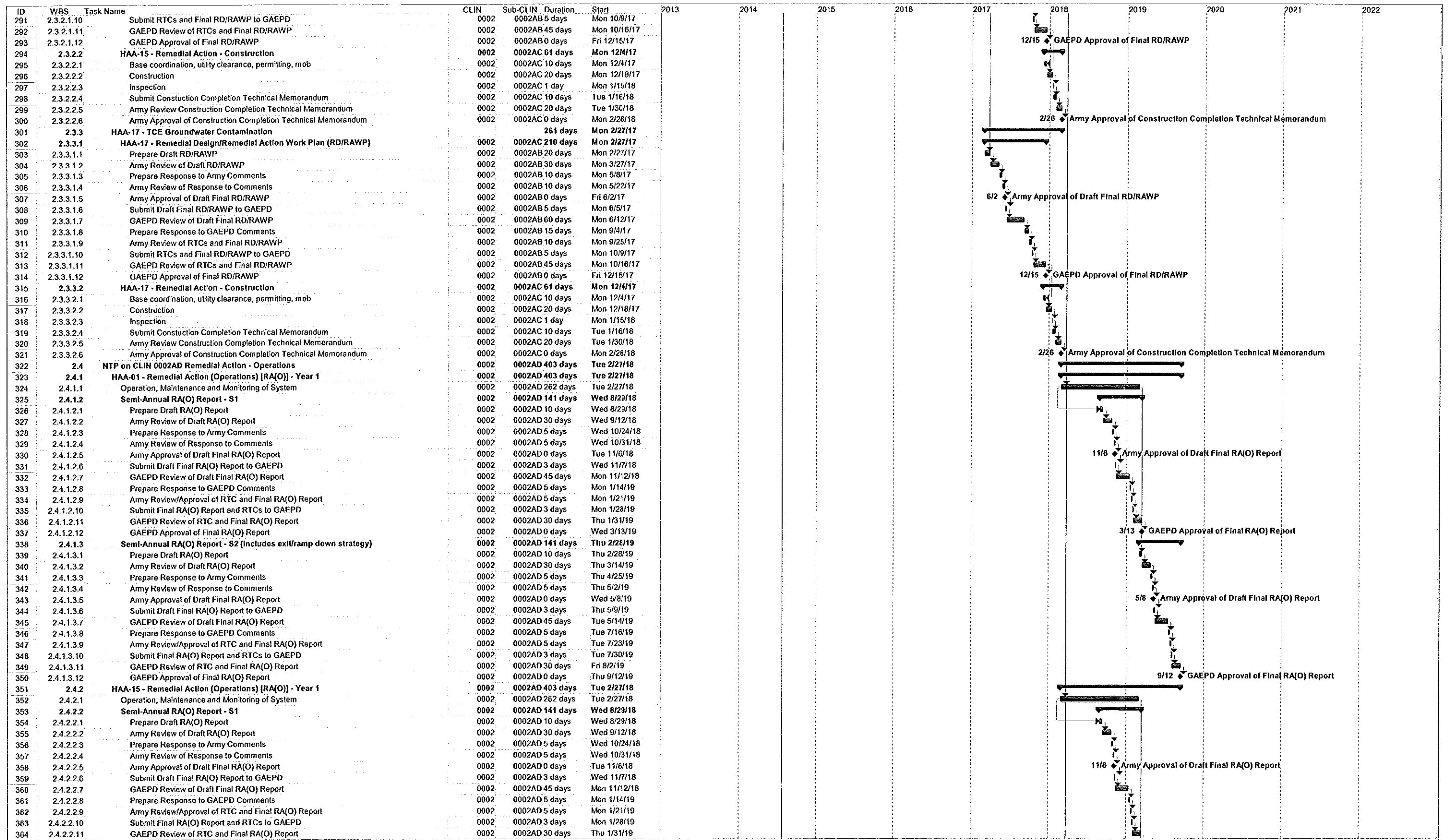
Project Schedule

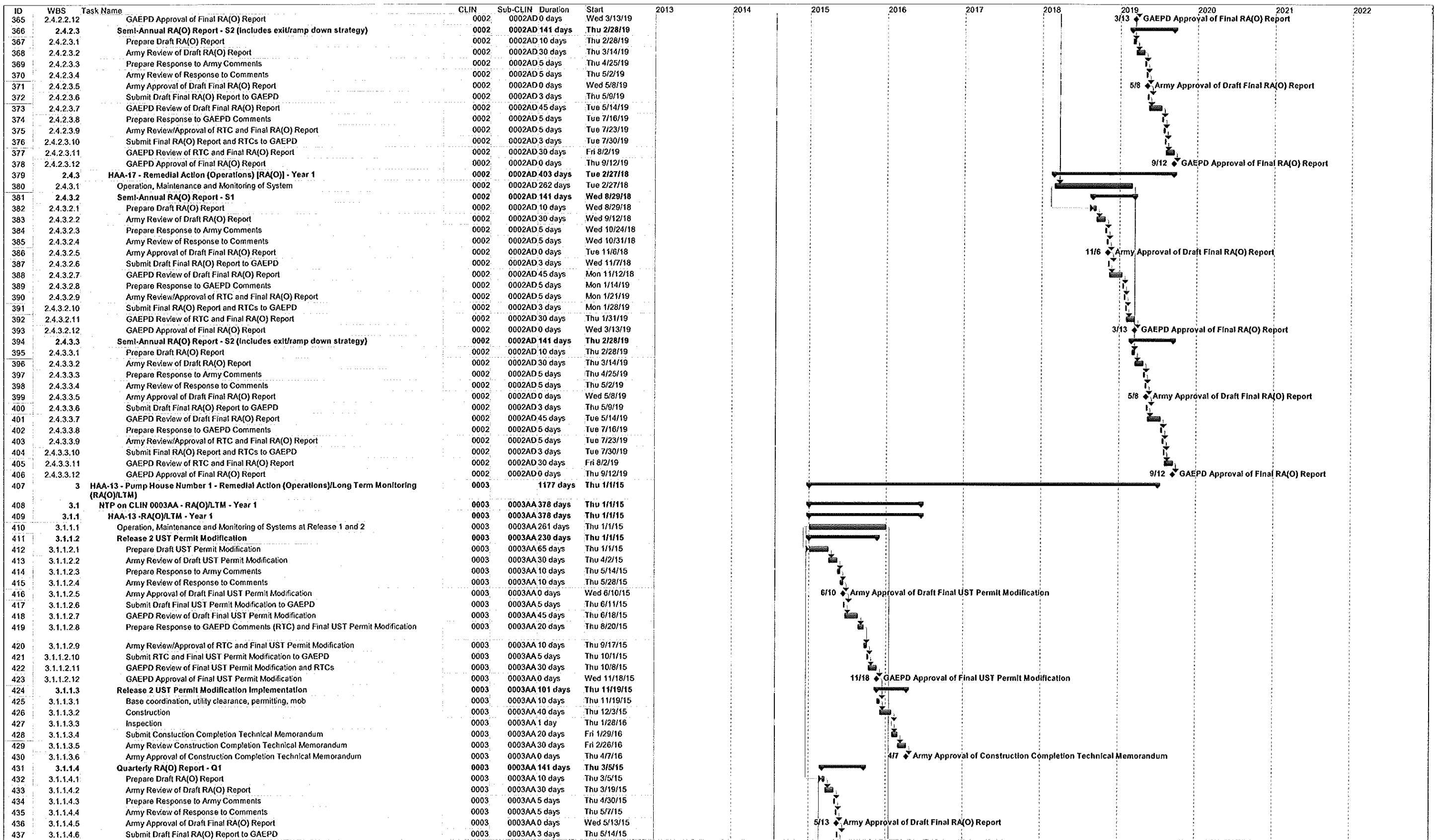


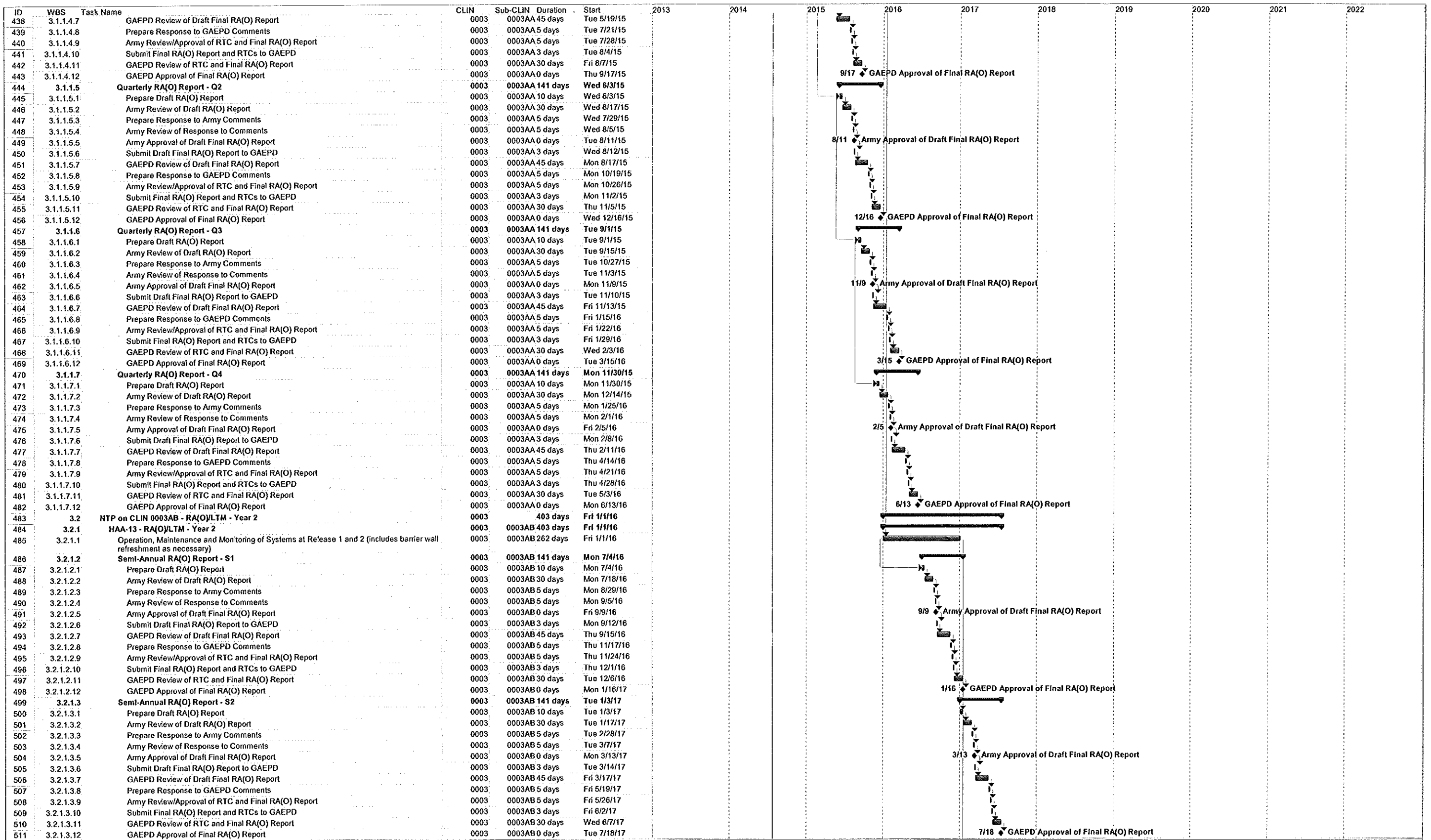


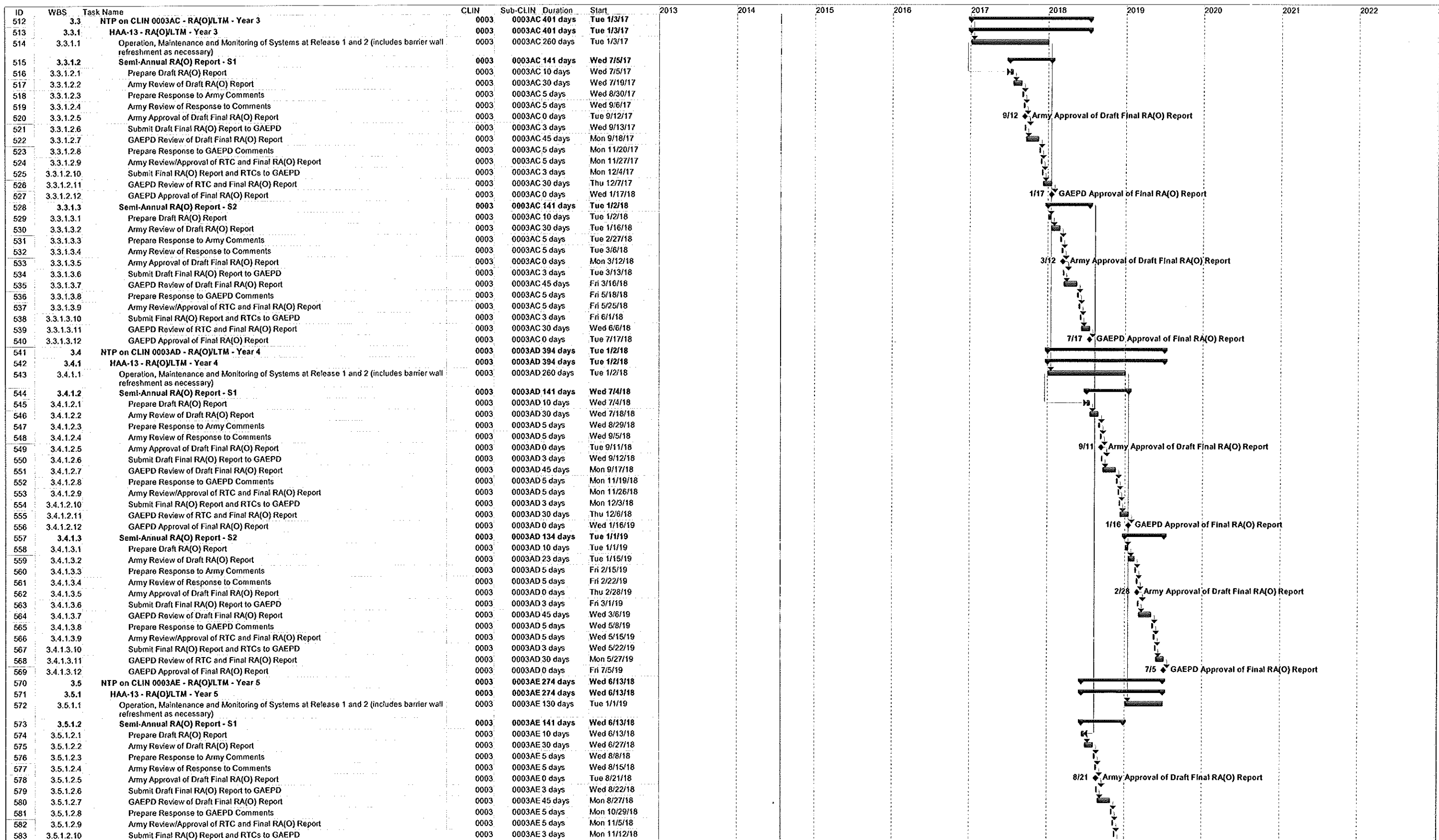




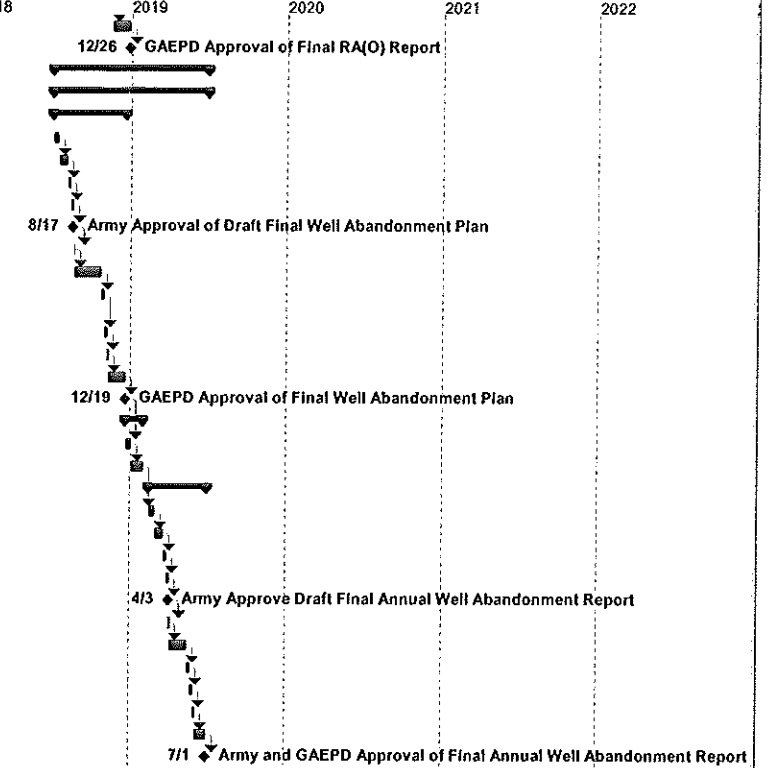








ID	WBS	Task Name	CLIN	Sub-CLIN	Duration	Start	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
584	3.5.1.2.11	GAEPD Review of RTC and Final RA(O) Report	0003	0003AE	30 days	Thu 11/15/18										
585	3.5.1.2.12	GAEPD Approval of Final RA(O) Report	0003	0003AE	0 days	Wed 12/26/18										
586	4	Well Abandonment Plan	0004		261 days	Mon 7/2/18										
587	4.1	NTP on CLIN 0004AA - Well Abandonment Planning and Execution	0004		261 days	Mon 7/2/18										
588	4.1.1	Well Abandonment Plan	0004	0004AA	123 days	Mon 7/2/18										
589	4.1.1.1	Prepare Draft Well Abandonment Plan	0004	0004AA	10 days	Mon 7/2/18										
590	4.1.1.2	Army Review of Draft Well Abandonment Plan	0004	0004AA	15 days	Mon 7/16/18										
591	4.1.1.3	Prepare Response to Army Comments	0004	0004AA	5 days	Mon 8/6/18										
592	4.1.1.4	Army Review of Response to Comments	0004	0004AA	5 days	Mon 8/13/18										
593	4.1.1.5	Army Approval of Draft Final Well Abandonment Plan	0004	0004AA	0 days	Fri 8/17/18										
594	4.1.1.6	Submit Draft Final Well Abandonment Plan to GAEPD	0004	0004AA	1 day	Mon 8/20/18										
595	4.1.1.7	GAEPD Review of Draft Final Well Abandonment Plan	0004	0004AA	45 days	Tue 8/21/18										
596	4.1.1.8	Prepare Response to GAEPD Comments (RTC) and Final Well Abandonment Plan	0004	0004AA	5 days	Tue 10/23/18										
597	4.1.1.9	Army Review/Approval of RTC and Final Well Abandonment Plan	0004	0004AA	5 days	Tue 10/30/18										
598	4.1.1.10	Submit RTC and Final Well Abandonment Plan to GAEPD	0004	0004AA	2 days	Tue 11/6/18										
599	4.1.1.11	GAEPD Review of Final Well Abandonment Plan and RTCs	0004	0004AA	30 days	Thu 11/8/18										
600	4.1.1.12	GAEPD Approval of Final Well Abandonment Plan	0004	0004AA	0 days	Wed 12/19/18										
601	4.1.2	Implement Well Abandonment	0004	0004AA	30 days	Thu 12/20/18										
602	4.1.2.1	Base coordination, permitting, mob	0004	0004AA	10 days	Thu 12/20/18										
603	4.1.2.2	Abandon wells	0004	0004AA	20 days	Thu 1/3/19										
604	4.1.3	Well Abandonment Report	0004	0004AA	98 days	Thu 2/14/19										
605	4.1.3.1	Prepare Preliminary Draft Final Annual Well Abandonment Report	0004	0004AA	10 days	Thu 2/14/19										
606	4.1.3.2	Army Review Preliminary Draft Final of Annual Well Abandonment Report	0004	0004AA	15 days	Thu 2/28/19										
607	4.1.3.3	Prepare Draft Final Annual Well Abandonment Report (includes RTCs)	0004	0004AA	5 days	Thu 3/21/19										
608	4.1.3.4	Army Review Draft Final Annual Well Abandonment Report	0004	0004AA	5 days	Thu 3/28/19										
609	4.1.3.5	Army Approve Draft Final Annual Well Abandonment Report	0004	0004AA	0 days	Wed 4/3/19										
610	4.1.3.6	Submit Draft Final Annual Well Abandonment Report to GAEPD	0004	0004AA	1 day	Thu 4/4/19										
611	4.1.3.7	GAEPD Review of Draft Final Annual Well Abandonment Report	0004	0004AA	30 days	Fri 4/5/19										
612	4.1.3.8	Response to GAEPD Comments	0004	0004AA	5 days	Fri 5/17/19										
613	4.1.3.9	Army Review and Approval of Response to Comments	0004	0004AA	5 days	Fri 5/24/19										
614	4.1.3.10	Final Annual Well Abandonment Report Submittal to GAEPD	0004	0004AA	2 days	Fri 5/31/19										
615	4.1.3.11	GAEPD Review of Final Annual Well Abandonment Report	0004	0004AA	20 days	Tue 6/4/19										
616	4.1.3.12	Army and GAEPD Approval of Final Annual Well Abandonment Report	0004	0004AA	0 days	Mon 7/1/19										



Appendix E

Milestone Billing Schedule

Milestone Billing Schedule
Hunter Army Airfield - W9124J-13-D-0009 Task Order 0004
Revision Date: May 21, 2014

CLIN	SubCLIN	PIKA-ARCADIS Activity Descriptions	Milestone Payment Amount	Funded Amount	Amount Paid/Invoiced	Billing Status	Performance Objective/Acceptance Criteria	Notes
0001		Development of Core Documents (PMP, QCP, HASP, QAPP, SAP, OPSEC SOP)						
	0001AA	Project Management Plan (PMP)	\$ 100,919	\$ 100,919	\$ -			
		Draft PMP - Respond to Army Comments	\$ 80,735	\$ 80,735	\$ -			
		Final PMP - Army Approval	\$ 20,184	\$ 20,184	\$ -			
0002		HAA-01 - (Former Fire Training Area and DAACG Chlorinated Solvents Areas): HAA-015 - (MCA Barracks Site); HAA-017 - (TCE Groundwater Contamination)						
	0002AA	Remedial Investigation/Feasibility Report	\$ 309,813	\$ 309,813	\$ -			
		Army Approval Draft RI/FS Work Plan - HAA-01	\$ 30,981	\$ 30,981	\$ -			
		Army Approval/Regulatory Concurrence Final RI/FS Work Plan - HAA-01	\$ 12,393	\$ 12,393	\$ -			
		Army Approval Draft RI/FS Report - HAA-01	\$ 24,785	\$ 24,785	\$ -			
		Army Approval/Regulatory Concurrence Final RI/FS Report - HAA-01	\$ 15,491	\$ 15,491	\$ -			
		Army Approval Draft RI/FS Work Plan - HAA-15	\$ 46,471	\$ 46,471	\$ -			
		Army Approval/Regulatory Concurrence Final RI/FS Work Plan - HAA-15	\$ 12,393	\$ 12,393	\$ -			
		Army Approval Draft RI/FS Report - HAA-15	\$ 24,785	\$ 24,785	\$ -			
		Army Approval/Regulatory Concurrence Final RI/FS Report - HAA-15	\$ 15,491	\$ 15,491	\$ -			
		Army Approval Draft RI/FS Work Plan - HAA-17	\$ 30,981	\$ 30,981	\$ -			
		Army Approval/Regulatory Concurrence Final RI/FS Work Plan - HAA-17	\$ 12,393	\$ 12,393	\$ -			
		Army Approval Draft RI/FS Report - HAA-17	\$ 21,687	\$ 21,687	\$ -			
		Army Approval/Regulatory Concurrence Final RI/FS Report - HAA-17	\$ 61,962	\$ 61,962	\$ -			
	0002AB	(Option) Proposed Plan/Record of Decision	\$ 104,216	\$ -	\$ -			
		Army Approval Draft Proposed Plan - HAA-01	\$ 41,686	\$ -	\$ -			
		Army Approval/Regulatory Concurrence Final Proposed Plan - HAA-01	\$ 10,422	\$ -	\$ -			
		Army Approval Draft ROD - HAA-01	\$ 31,265	\$ -	\$ -			
		Army Approval/Regulatory Concurrence Final ROD - HAA-01	\$ 20,843	\$ -	\$ -			
	0002AC	(Option) Remedial Design/Remedial Action - Construction	\$ 426,695	\$ -	\$ -			
		Army Approval Draft RA Work Plan - HAA-01	\$ 42,669	\$ -	\$ -			
		Army Approval/Regulatory Concurrence Final RA Work Plan - HAA-01	\$ 17,068	\$ -	\$ -			
		Army Approval Draft RA Completion Report - HAA-01	\$ 34,136	\$ -	\$ -			
		Army Approval/Regulatory Concurrence Final RA Completion Report - HAA-01	\$ 21,335	\$ -	\$ -			
		Army Approval Draft RA Work Plan - HAA-15	\$ 64,004	\$ -	\$ -			
		Army Approval/Regulatory Concurrence Final RA Work Plan - HAA-15	\$ 17,068	\$ -	\$ -			
		Army Approval Draft RA Completion Report - HAA-15	\$ 34,136	\$ -	\$ -			
		Army Approval/Regulatory Concurrence Final RA Completion Report - HAA-15	\$ 21,335	\$ -	\$ -			
		Army Approval Draft RA Work Plan - HAA-17	\$ 42,669	\$ -	\$ -			
		Army Approval/Regulatory Concurrence Final RA Work Plan - HAA-17	\$ 17,068	\$ -	\$ -			
		Army Approval Draft RA Completion Report - HAA-17	\$ 29,869	\$ -	\$ -			
		Army Approval/Regulatory Concurrence Final RA Completion Report - HAA-17	\$ 85,338	\$ -	\$ -			

Milestone Billing Schedule
Hunter Army Airfield - W9124J-13-D-0009 Task Order 0004
Revision Date: May 21, 2014

CLIN	SACLIN	PKA-ARCADIS Activity Descriptions	Milestone Payment Amount	Funded Amount	Amount Paid/Invoiced	Billing Status	Performance Objective/Acceptance Criteria	Notes
0003	0002AD	(Option) Remedial Action Operations	\$ 416,430	\$ -	\$ -		Army Approval through the COR/Army and Regulatory Concurrence	
		Army Approval/Regulatory Concurrence- Semi Annual System Performance Report - Q2 - HAA-01	\$ 41,643	\$ -	\$ -			
		Army Approval/Regulatory Concurrence- Semi Annual System Performance Report - Q4 - HAA-01	\$ 41,643	\$ -	\$ -			
		Army Approval/Regulatory Concurrence- Semi Annual System Performance Report - Q2 - HAA-15	\$ 83,286	\$ -	\$ -			
		Army Approval/Regulatory Concurrence- Semi Annual System Performance Report - Q4 - HAA-15	\$ 83,286	\$ -	\$ -			
		Army Approval/Regulatory Concurrence- Semi Annual System Performance Report - Q2 - HAA-17	\$ 83,286	\$ -	\$ -			
		Army Approval/Regulatory Concurrence- Semi Annual System Performance Report - Q4 - HAA-17	\$ 83,286	\$ -	\$ -			
		HAA-13 Pump House #1						
0003	0003AA	(Option) RAO/LTM	\$ 135,704	\$ -	\$ -		Army Approval through the COR/Army	
		Army Approval- Quarterly System Performance Report - Q1	\$ 33,926	\$ -	\$ -			
		Army Approval/Regulatory Concurrence- Semi-Annual CAP Performance Report - Q2	\$ 33,926	\$ -	\$ -			
		Army Approval- Quarterly System Performance Report - Q3	\$ 33,926	\$ -	\$ -			
	0003AB	Army Approval/Regulatory Concurrence- Semi-Annual CAP Performance Report - Q4	\$ 33,926	\$ -	\$ -		Army Approval through the COR/Army and Regulatory Concurrence	
		(Option) RAO/LTM	\$ 127,092	\$ -	\$ -			
		Army Approval/Regulatory Concurrence- Semi-Annual CAP Performance Report - Q2	\$ 63,546	\$ -	\$ -			
		Army Approval/Regulatory Concurrence- Semi-Annual CAP Performance Report - Q4	\$ 63,546	\$ -	\$ -			
	0003AC	(Option) RAO/LTM	\$ 133,218	\$ -	\$ -		Army Approval through the COR/Army and Regulatory Concurrence	
		Army Approval/Regulatory Concurrence- Semi-Annual CAP Performance Report - Q2	\$ 66,609	\$ -	\$ -			
		Army Approval/Regulatory Concurrence- Semi-Annual CAP Performance Report - Q4	\$ 66,609	\$ -	\$ -			
		(Option) RAO/LTM	\$ 128,624	\$ -	\$ -			
0004	0003AD	Army Approval/Regulatory Concurrence- Semi-Annual CAP Performance Report - Q2	\$ 64,312	\$ -	\$ -		Army Approval through the COR/Army and Regulatory Concurrence	
		Army Approval/Regulatory Concurrence- Semi-Annual CAP Performance Report - Q4	\$ 64,312	\$ -	\$ -			
		(Option) RAO/LTM	\$ 68,856	\$ -	\$ -			
		Army Approval/Regulatory Concurrence- Semi-Annual CAP Performance Report - Q2	\$ 68,856	\$ -	\$ -			
	0003AE	(Option) RAO/LTM	\$ 98,433	\$ -	\$ -		Army Approval through the COR/Army and Regulatory Concurrence	
		Army Approval/Regulatory Concurrence- Semi-Annual CAP Performance Report - Q2	\$ 39,357	\$ -	\$ -			
		(Option) Well Abandonment Plan	\$ 9,846	\$ -	\$ -			
		Army Approval Draft Well Abandonment Work Plan	\$ 29,538	\$ -	\$ -			
0004	0004AA	Army Approval Draft Well Abandonment Report	\$ 19,692	\$ -	\$ -		Army Approval through the COR/Army and Regulatory Concurrence	
		Army Approval/Regulatory Concurrence Final Well Abandonment Report						

Milestone Billing Schedule
 Hunter Army Airfield - W9124J-13-D-0009 Task Order 0004
 Revision Date: May 21, 2014

CLIN	SubCLIN	PIKA-ARCADIS Activity Descriptions	Milestone Payment Amount	Funded Amount	Amount Paid/Invoiced	Billing Status	Performance Objective/Acceptance Criteria	Notes
0005	CMR Reporting	CMR Annual Submittal	\$ -	\$ -	\$ -	-	Army written approval through COR	
Total			\$ 2,050,000	\$ 410,732	\$ -	-		